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Charlotte Medical Journal.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY.

VOLUME 31. NUMBER 1. Charlotte, N. C., July, 1907. $2.50 PER ANNUM

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The Charlotte Medical Journal.

Vol. XXXI CHARLOTTE, N. C., JULY, 1907. No. 1

Annual Oration Before the North Carolina State Medical Society, Morehead City, N. C., June 12, 1907.*

By L. B. McBrayer, M. D., Asheville, N. C.

THE DOCTOR.

A call to the higher life.

Mr. President, Ladies and Gentlemen:

One cannot mention an example of heroism that does not find its parallel in George Washington. Murat, in a paroxysm of passion, could spur all alone into the fire of a Russian battery,—Washington did the same thing at Kipps Bay to shame his men into courage.

The world gazes with awe on Napoleon, rushing over the bridge of Arcola and planting his standard amid the storm of fire that swept it;—Washington spurred up to the very muzzles of the enemy's guns at Princeton, and sat beneath his country's flag while the shot fell like rain about him.

Boneparte rallying his broken troops at Marengo and rolling back the battle on the foe, presented a beautiful spectacle;—but Washington doing the same thing at Monmouth under the burning sun of one of the hottest days ever witnessed in this country, was a nobler one.

George Dewey is the hero of the Spanish-American war: when ordered to proceed at once from Hong Kong with his Asiatic squadron and find and destroy the Spanish fleet, he did not do as another commander, who had to resort to the courts to get what he claimed to be his rights and honors, answer that he could not go into the bay until the land forces should take the city and man the forts; but he sailed right into Manilla Bay, passing under the open-mouthed cannon that securely rested on the forts of Cavite, and with a daring and bravery that is not exceeded in ancient or modern warfare, destroyed the Spanish fleet, silenced the forts, captured the city and broke the backbone of the Spanish nation.

Julius Caesar was the greatest man of the Romans, or perhaps of all the ancient world. In every relation of life he obtained, apparently without effort, to the highest excellence;—as a citizen, a politician, a man of letters, a general, a statesman and an orator. Yet with all his victories there was one triumphant arch under which he was never allowed to pass—the arch of Pubes—and had it not been for the skilled hand of the obstetrician and surgeon who performed Caesarean section on his mother he would never have seen the light of day—he would have died before he was born.

I could go on at length recounting the heroes of ancient and modern times and their deeds of valor, but will content myself with naming one other, the greatest of them all—the doctor.

It is a brave thing to stand or charge in the midst of a hail of bullets in defense of one's country; it takes a hero to throw himself in front of a moving train to save a human being from impending death; it is a noble thing to follow a bear into the mountain fastnesses and rescue a child from its embrace; it is an heroic thing to follow an eagle to the pinnacles and crags of the Rockies and rescue a babe from its talons; but it is more heroic to stand up and measure arms with the dark Angel of Death, and slowly one by one loosen his icy fingers from the throat of the lovely babe and restore it to its anxious mother's bosom.

The soldier is cheered on to deeds of valor by the elbow touch of his comrades, by the lively strains of martial music and the glitter and roar of musketry; at the same time he fears to disobey a command lest he be punished and disgraced. But when pestilence walks unseen in the midst of the people, slaying its victims in every house, visiting the altar and the office, the proud mansion of the aristocrat and the mud hovel of the peasant,—it is then the physician passes by the sentry who strictly guards the quarantine, and the door swings back on its hinges, as it will to admit none other, and he enters to fight the unseen but deadly foe, single handed and alone.

The warrior builds his throne on a pyramid of skulls, and floats himself to glory on a sea of blood—but the physician delights not in such things. We follow in the warrior's wake and bind up the cannon shots and sabre cuts which he makes. We staunch the blood of his bomb-mangled victims.

Could we induce ourselves to believe for a moment the sole mission of the physician to be the administration of pills and potions and to yield a servile obedience to the caprices of his patients (a bondage that dishonors and disgraces the name) I would quit the practice of medicine before the sun shows his face above the eastern horizon in the morning, but we believe our profession to be that of a teacher of the laws of our being. Our college edifice is magnificent; aye, as extensive as the earth; our laboratory, whatever it contains; our pupils, man-

*Read before the North Carolina Medical Society at Morehead City, N. C., June 1907.

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kind, our text-book, the page of nature. Then let us take the suggestion of the muse, as expressed in the following lines:

> And nature, the old nurse, took
> The child upon her knee,
> Saying 'Here is a story book
> Thy Father hath written for thee.'
> "'Come, wander with me,' she said,
> Into regions yet untrod;
> And read what is still unread
> In the manuscript of God.'"

Every one who enters our noble profession owes it to himself and to his confrere's to be a success. And I do not use the word in the latter day acceptation of the term, from a financial standpoint only; though I would not have you believe for a moment that I decry this standard altogether. It is my opinion, after mature deliberation, that the doctor is paid less, in proportion to the service rendered, than any other man, be he laborer, artisan, or professional man; for who can measure the value of a human life? And yet the doctor has no one to blame but himself. If the doctor says, as per bill rendered, he is only worth so much, there are not many Americans, and no Jews at all, who will insist that he is worth more. Let him make himself worthy of the noble profession he has entered and render his bills accordingly and there will usually be mutual satisfaction, both on the part of himself and his patients.

Success is a relative term, and it has been truthfully said that there is a dignity in mediocrity as well as a dignity of greatness, and the best doctor is often the one of whom the public hears least. Each doctor has but one chance in one hundred thousand to become the leading physician of these United States, but one chance in two thousand to become the leading physician in this grand old State, but you have one chance in one anywhere to attain the happiest and most useful lot given to man; that is, to be a vigorous, whole-souled, intelligent, up-to-date physician.

"No physician has the right to consider himself as belonging to himself" is a saying attributed to Aristotle, and it has become a maxim, and is accepted as such by all the people. They expect from you the heroism of constant service, not the kind that does one flaring deed that makes men stare and shout, but the kind of courage regardless of personal risk that is never wanting. They expect you to give up days and nights, sleep and pleasure, to the battle with disease and vice, and when your personal happiness conflicts with this great ideal, they expect you to be consoled with the thought that the right to claim such happiness is as nothing compared with the privilege of resigning it. Are you the man that can adopt such a life of renunciation of your own free will and accord? You must be to become a successful physician. If not, it is not yet too late to turn back.

In order to be a successful physician you must be loyal. Loyal to your profession, loyal to your patients, and loyal to yourself. Think how much of the accumulated knowledge of the centuries, laboriously compiled by the efforts of enthusiastic members of your profession who have gone before, is yours for the asking. Thich how much of the experience, conclusions and ideas of the great men of our day as recorded in our books and journals, are at your command. Think how you may sit with the greatest men in our profession in this or other countries, and sip wisdom as it falls from their lips, almost without money and without price. Think how the mantle of honor and respect falls upon your shoulders, even as the mantle of Elijah fell upon Elisha, as you enter the great profession of medicine. And when you think on these things, if you feel that the day will ever come when you will fail to be loyal to such a noble profession, I would say to you again, it is not yet too late to turn back.

Loyalty to your patients requires that you should extend to them sympathy and succor in their hours of sorrow, the cheerfulness that vanquishes despair, the skill that baffles even death itself. Serve whoever calls, for small fees or no fees, at all times and seasons, and console yourself with the thought that the time will come when you can dictate terms and hours, and you can keep younger men around you who will be willing to work as you have worked. Your patients expect, and have a right to expect, even more than science and sympathy. You must be honest, honorable, courageous, and efficient—and you are all this, if you are giving them the best wisdom that is *in* you and the best knowledge available *to* you.

Loyalty to yourself demands that you so live and act that you will have self-respect. You cannot then fail to have the respect of others. While as before stated your time is never your own, yet you must take time to keep posted, to read, to study, and thus keep abreast of the rapid advances in medicine. This is an age of progress; advancement is the watchword throughout the length and breadth of this broad land of ours. In manufacture, in agriculture, in educational systems, in financial schemes, in affairs of State and Nation the onward march of progress is hailed with glad acclaim: but I say to you today, with a full belief that there is no one on this great continent or elsewhere who will rise up to say me nay, that the great medical profession is the

vanguard of this onward march of progress; she has outstripped them all, she is marching on, conquering and to conquer. We have conquered small-pox, have vanquished the Klebs-Loefler bacillus of diphtheria, wiped the dreadful scourge of yellow fever from the Island of Cuba and from the face of the earth, and have forced the retreat of the malaria carrying mosquito to the last ditch and cess pool. Puerperal fever, at one time more deadly than small-pox and yellow fever, is now seen mostly in text-books, thanks to the principles of asepsis. We have invaded the abdomen, and tumors, extra uterine pregnancy, pyosalpinx appendicitis, volvulus, etc., etc., that have destroyed more lives than the combined armies of the world, and two score years ago existed only in the pipe dreams of the most advanced thinkers, have been rendered innocent as suckling babes. While this is all true, yet Alexander's lament need not be ours, for though we have chained many a captive bacillus to our chariot wheels, there are many more left to conquer, and it behooves us to gird up our loins and arm ourselves for the fray, and the doctor owes it to himself, whatever may be the economies he may find it necessary to practice, to provide himself with the latest books and read and study them, subscribe for two or more of the best journals and peruse them each week, for in no other way can he hope to keep abreast of a science that is advancing as rapidly as is the science of medicine. The great journals are the watchmen upon the walls; they are both the heralds and the advance guards of progress. They win their victories and move on to new battle fields before the text-books have learned that there has been a fight. If the doctor cannot be loyal to himself as just outlined, I would again say to him: It is not yet too late to turn back.

The practice of medicine, and I use the word in its most comprehensive meaning, is the grandest and greatest work in which man was ever allowed to engage. We work together with God in the saving of human life and the amelioration of human suffering. It is said that in the career of John Kepler, the great astronomer, when he discovered the laws of planetary motion he was found in his study overcome with emotion, exulting in his triumph and with tears of joy streaming down his face, he was heard to exclaim, "I think thy thoughts after thee, Oh! God." And so, when I see a woman in the throes of travail, with some abnormality that prevents the completion of the purpose as ordained by God, and see the surgeon and obstetrician hasten to relieve her by the use of the forceps or Caesarean section or other means, and see him save two human lives by one bold act; when I see the severed artery rapidly emptying the system of its life blood and see nature fail in every attempt to check the flow by coagulation, and then see the surgeon come to the rescue and deftly pick up the bleeding vessel and secure it with a ligature; when I stand by the bedside of a dying woman suffering from a ruptured tubal pregnancy and can see the rapid approach and even hear the rustling of the wings of the dark Angel of Death, only a few hours away at most, and then see the skillful hand of the surgeon open the abdomen, secure the bleeding vessel and drive away the dread messenger; when I see a typhoid perforation near the caecal end of the ileum, with twelve inches of the intestine invaginated into the caecum to protect the peritoneal cavity, and then nature's effort to do a resection by causing death and sloughing to relieve the obstruction of the bowels, and then see the steady hand of the surgeon open the abdomen, reduce the invagination, complete the resection, and save a human life; and when I see the laboratory worker, with his microscope and other instruments of precision for experimentation, securely hidden from the approving gaze of the applauding multitude, working out the formulae for the antitoxin that has become an antidote for the dreadful poison of diphtheria, and thereby saves thousands of innocent lives every year; when I see the student of yellow fever exposing himself to the ravages of this disease that he might save other human lives, and when after years of toil and study he works out the theory that yellow fever is communicated by the bite of a certain kind of mosquito a certain length of time after having sucked the blood of a patient suffering with the disease, and then to prove his theory beyond the cavil of the most scrupulous, shuts himself up in a room with an infected mosquito and goes down to his death a martyr to the cause he believed in and worked to establish. Did I say martyr? No, not martyr, but like the lowly Galilean he gave himself a willing sacrifice that the many might be saved. If medals for heroic deeds are given, if a man's name is to be placed in the hall of fame for acts of noble worth, why should not the name of Dr. Jose W. Lazear receive these honors? And Dr. Lazear is not the first, neither will he be the last doctor to willingly lay down his life because the path of duty leads that way. I say, when I think on these things I feel like paraphrasing the words of the great astronomer, and saying, "I do thy works after thee, Oh! God."

I have stood on the deck of a magnificent ship as it majestically sailed the sea,

and witnessed the moon in all its splendor rise out of the mystery of the deep and shed its shimmering rays over the water like millions of diamonds sparkling and dancing on the waves, and I thought the scene was surpassingly beautiful.

I have stood on a lofty mountain peak at dawn and witnessed the sun come forth in all its majesty and power and flood the world with light and glory, and I thought it was beautiful and grand.

I have seen in the darkness of midnight the forked lightning leap from hill to hill, from crest to crest, and cut and shiver the inky clouds into rivers of fire, while the thunder rolled and reverberated in the distance, and the universe trembled in the Titantic power of the storm King, and I exclaimed—how beautiful, how grand, how sublime, is the omnipotent power of God. But, dear confrere, the most beautiful, the grandest, the sublimest creation or manifestation of God's omnipotence is a man, created in His own image, who loves his fellow man. One who ministers to the wants and necessities of his fellow man as softly and gently as the moonbeams fall upon the midnight sea, one who visits the sick and fills the room with a radiance as bright and glorious as the light of the new day; one who dispels the shadows of adversity as the lightning cleaves the clouds in a somber sky;—such a man is the true physician.

When in the cottage blessed with Love's sweet store
A babe is born and o'er the rustic door
Is hung the crown of motherhood, and fair
Is all within—the Doctor's there.

When 'neath the pall of mystic Death's weird spell
A mother's heart is broken by the knell
Of all that's dear, and on the stair
No baby feet—the Doctor's there.

When virtue flees and breath of ruthless lust
Eats into the soul as does the gnawing rust,
When no one else with her the shame will share,
With mother's touch—the Doctor's there.

Where blossoms Life's sweet Bud at blush of day,
Where breath of withered rose at eve-tide steals away
On the South wind—in joy and care
An uncrowned king—the Doctor's there.

Tonight, I wish I were an orator, that I might paint for you a word picture, that would portray more graphically and beautifully than sculptors chisel or artists brush the greatness and goodness of the medical profession. Could I borrow from the sun his cheery smile, from the moon her golden beams of light, from the southern zephyrs their softness, from the rose its fragrance, from the rain-bow its celestial beauty, from the babbling brook its laughter and song, from the sea its awe and wonder, from the valley its serenity, and from the mountains their majesty, and put these down upon a piece of azure blue sky, with comets for commas, and planets for periods, I might then paint for you the picture. Until then, let us be true to our trust.

After all, we cannot fail to realize that we are constantly fighting a foe that sooner or later, according to the immutable and unchangeable laws of nature, will come out victorious. From the edict "All that is born must die, all must submit to the dominion of death," there is no appeal;—and after a little while they will say of each member of the North Carolina State Medical Society, as they did of the Great Physician,—"He saved others, himself he cannot save." And when the day of capitulation shall arrive—when that inevitable hour shall have come, may a certain grim adversary recognize a noble foe and deal gently with the Doctor.

Treatment of the Intestinal Diseases In Children.*

By R. J. Noble, M. D., Selma, N. C.

Mr. President and Gentlemen of the Society:

My paper is on the treatment of the summer intestinal diseases of children, or rather infants, which includes all the summer diarrhoees—ileo-colitis, cholera infantum, etc.

Twelve years ago I lost a child twenty-one months old from ileo-colitis. I had the best medical men with him that could be had. Every attention was given him, but to no avail; he would have lived just as long had he not had a drop of medicine, and I shall never forget his last feeble words, "bye, bye." To think that I had to sit there and see that sweet life go out and I perfectly helpless to relieve him or prolong it one hour was more than I could bear. I at once began to look for other treatment, as all I had or could get was worse than useless. I tried various lines of treatment but with no better success, though of course some have gotten well. One day I had a case, an infant about 12 months old, with the following symptoms: Vomiting, skin cold and shivelled, bowels acting every ten to thirty minutes, streaked with blood and with severe tenesmus, great thirst, fever per rectum 103½, countenance expressive of great pain and fear. What must I do for him? All that I had done for others in the same condition had done no good. What did I want to do? The skin must be warmed, the vomiting and fever must be controlled. Atropia would cause the capillaries to dilate, so I gave him 1-1200 of a grain every two hours. Aconite would reduce the fever, so I gave him one drop every two hours. I gave him 1-10 of

*Read before the North Carolina Medical Society at Morehead City, N. C., June 1907.

a grain of calomel every hour till ten doses were given; nothing else, no food, not allowed to nurse for 24 hours; tablespoonful of water often. I left for home some four miles, and had not been there half an hour when a messenger came saying, "the baby is worse and they want you to come back." When I arrived I was told that shortly after giving the atropia the baby had turned red and had a burning fever for about an hour, but was now better. The patient was asleep but had only a slight flush. Said there was not so much tenesmus with the last action and less blood. Ordered treatment continued and told them they might expect a red skin with each dose of the red medicine. I usually color the atropia. The next day he seemed better and the treatment was continued to recovery. That was in the summer of 1903, and since then I have not lost a case. And I believe that if I had treated my little fellow that way he would now be living so far as that illness was concerned. My treatment now is to give 1-1200 of a grain of sulphate of atropia every two to three hours, never giving the second dose as long as the skin is red, for that is all that I want. I have tablets of 1-100 of a grain of sulphate of airopia. I put one into a glass and put 12 teaspoonfuls of water to it with a small piece of red coloring, then in to another glass containing 12 teaspoonfuls of water, I put 12 to 48 drops of tincture of aconite, one teaspoonful of which is given every two hours. I have this given regardless of fever, that is, what the parents think of the fever, for the skin is always cool except when red from the atropia. I do not try to check the bowels, as I believe nature is trying to get rid of the poison. The mothers often ask, "Doctor, can't you give something to check the bowels?" I answer, No. They will check in good time. As the atropia checks the secretions there will not be so many movements. I never allow ice water, though I let them have a small quantity of water as often as they wish. For the nursling I stop the breast for 24 hours and allow albumen water. After the fever is controlled I usually give the following:

Zinc-sulpho carb. gr. 1-20
Salol, gr. ⅓
Cal. 1-10
Lactated pepsin, 1½ gr.

Every two or three hours for some days.

I find that after each drink of iced water the bowels will act in from three to ten minutes, and I believe that a great deal of harm is done by the ice water. I do not insist on nourishment, the patient will take it when the fever goes off. Keep the fever down, let the bowels alone, do not give opium, keep the skin warm and your patient will get well.

Primary Tuberculosis of Caecum and Appendix: Report of Case.

By B. F. Stevens, M. D. El Paso, Texas.

Miss M., aged 24. No tubercular history of any kind in family.

Previous History.—Had always been well until age of 14; menses appeared at age of 13. At that time she developed what appeared to be an attack of appendicitis. Acute severe pain in right side, low down, with elevation of temperature and vomiting. This was followed by recovery in two weeks. She then had two such attacks a year until age of 17, when they occurred more frequently, coming on without apparent cause about every two months.

Various diagnoses were made, as female trouble and indigestion. She was drugged and poulticed during each attack until it subsided.

During the past two years she has noticed a tumor in the right inguinal region, larger during the attacks, but always present. Ingestion of meat or vegetables during this period caused vomiting and colic, so patient has practically been on liquid diet.

Status Present.—Patient weighs about 70 pounds; is thin and anaemic; has been acutely ill two weeks; is unable to retain anything on stomach; temperature 100½ F.; pulse 120 to 130; leucocyte I count 10,000; haemoglobin 65 per cent.; urine negative.

Physical Examination.—Chest negative; no cough or expectoration; palpation of abdomen reveals tumor in right inguinal region size of small lemon, very tender but hard. Patient was put on rectal feeding for three days, until vomiting ceased; then was fed on raw eggs, milk and beef juice for five days, and then operated on after usual preparation.

Operation.—Operation disclosed a fixed hard tumor attached firmly to right iliac fossa, involving head of caecum. The mass was thought to be malignant, so was excised in toto, necessitating resection of 18 C. of caecum. End to end anastomosis was made with a Murphy button, reinforced with Lembert stitches of silk. Wound was closed in usual manner with a gauze drain. A rubber tube was substituted the third day, when a foecal fistula was noted. I think this was caused by the gauze. The fistula closed in ten days. The button did not pass until the 56th day, though it caused no disturbance, patient being on a solid diet after the first week. She doubled her weight in three months, and was apparently well, and able to eat anything.

Examination of Tumor.—In fresh state it was 12 C. long by 10 C. in circumference.

The intestinal wall was thickened and indurated, and had lost its identity. The ileo-cæcal opening would barely admit a match. The appendix was entirely obliterated in the inflammatory mass. Microscopic examination showed no trace of normal intestinal structure. Intense infiltration of round cells could everywhere be found, also giant cells. Specimen was not stained for tubercle bacilli.

Post Operative History.—Three months after operation she noticed symmetrical enlargement of abdomen, gradually increasing in size. Abdomen suddenly became tender on right side. She developed a temperature of 102 with pulse of 120, with anorexia and vomiting. Physical examination showed enlargement of abdomen, more tender on right side, with probably some free fluid.

Second Operation.—Through old scar allowed escape of serous bloody fluid from a previously ruptured left ovarian cyst, due to a long twisted pedicle. There was also a right ovarian cyst with a long pedicle, which allowed it to extend up under the spleen and over the left kidney. There were no adhesions and both cysts were cleanly extirpated. The wound closed without drainage after the uterus had been suspended after Kelly's method. Examination of line of union where resection of intestine was made, showed it to be clean and free from adhesions. The cysts were evidently of rapid growth, as nothing was noticed at first except a few miliary tubercles on posterior surface of the uterus.

Patient left the hospital at the end of the second week. Two months later another tumor developed in the inguinal region the size of a lemon. The thigh became semi-flexed on abdomen. Pain was severe, requiring morphine. She was unable to walk. Temperature ranged from 99 to 101, and pulse from 100 to 120. A probable diagnosis of abscess was made. I again cut down through the old scar; found intestines matted together in a hard mass, but no free fluid or pus. Attempts to separate them were unsuccessful. After tearing several holes, I finally sewed up, leaving in drainage. An anastomosis was impossible because of the complete involvement of entire small intestine. Patient went from bad to worse until complete stenosis occurred two months later. Abdomen became tense as a drum head, and at the suggestion of the patient my colleague, Dr. Crouse, during my absence on my vacation, made an artificial anus. The tension was so great that the moment he opened the abdomen the intestine burst in several places. She only lived about four hours after leaving the table.

Recapitulation.—This patient seemed to entirely recover after the first operation. Her weight doubled. She had no digestive disturbance of any kind. At the second operation the whole abdomen was clear of tubercles; there were no enlarged glands or adhesions. She was in good physical condition. The prognosis certainly seemed good, yet, in spite of her increased weight, the original trouble, only in a plastic form, recurred.

Originally, at the age of 14, she had evidently suffered from acute attacks of appendicitis, thus affording a good field for tubercular infection, which in all probability occurred through infected milk.

McArthur[1] reports such a case in a child of ten. Six months after onset a laparotomy was done, but because of a general abdominal tuberculosis no anastomosis or resection was made. Change of climate, rest, suitable food and X-rays were used without relief. Abdomen was re-opened in eight months, on account of total obstruction. The tubercles had disappeared, though a tumor was still present involving the head of the cæcum. Lateral anastomosis was made between the ileum and sigmoid, which gave the necessary relief. Patient gained a pound a day for the first 30 days. McArthur thinks the infection was grafted on an acute appendicitis, due to tuberculous milk, which was afterwards found to have come from a herd, some of which were tuberculous. All deposits cleared up except the tumor, which may have been due to the X-rays or the laparotomy. In my case the X-rays were not used, yet all nodules disappeared.

Intestinal tuberculosis occurs in two forms: Ulcerative, most frequently seen in connection with pulmonary tuberculosis, and hypertrophic, which more often occurs as a primary disease.

Cornet[2] quoting from the experiments of Baumgarten, Wesner and Fisher, in feeding animals with tubercle bacilli, says: "This organism may find its way through normal mucosa without leaving any sign of a lesion. Here they may go on to further development and form tubercles and ulcers, and find their way along lymph channels to the mesenteric glands. This may be accomplished by mechanical means, and partly by the aid of wandering cells." He is also of the opinion that primary intestinal tuberculosis is due to eating infected food. Lesions of the mucosa facilitate invasion, hence the association with typhoid.

Behring contends that tuberculous milk is a most important source of infection, both of intestinal and pulmonary tuberculosis. This theory would account for a tubercular infection following an ordinary pyogenic

infection of the appendix, as in the cases above mentioned.

The feeding experiments of Calmette and Guerin[3] furnish important information somewhat along this line. They find that the single introduction into the stomach, by a tube, of a quantity of tubercle bacilli, will in 30 to 45 days cause the development of sub-pleural and peri-bronchial tubercles at apices of the lungs, with alveolar involvement later. Also the recent studies of Harbitz[4] of the distribution of tuberculous lesions in children afford many points in support of the belief that tuberculosis of the lungs and adjacent lymph nodes may result from invasion through the digestive tract.

On the other hand, twenty years ago, Arnold, Muscatello and Ponfik proved by their experiments that pulmonary tuberculosis in animals was not caused by feeding infected food, but by inhalation of tuberculous particles. So the mode of infection is far from being settled.

Osler[5] in his last edition says: "Primary intestinal tuberculosis is very rare, occurring but once in one thousand autopsies on tubercular subjects in the Munich Pathological Institute, but according to McArthur, whose statistics are later and from varied sources, fifty per cent. of all autopsied children dying before the age of ten have the disease, and that the point of infection is through the intestinal wall in over 21 per cent., and primary in about 5 per cent. (Lubarsh). Some authorities even go so far as to say that the majority of all cases of tubercular infection, both pulmonary and intestinal, occur through the intestinal wall. Hartman and Pillet published the first detailed account of hyperplastic caecal tuberculosis.[6]

Regarding mode of treatment Baum[7] advises resection, exclusion being reserved for the debilitated. American operators seem to prefer the latter mode of treatment, which in the light of my limited experience is easiest and most sensible.

1. Surg. Gyn. and Obst., Aug. 1906.

2. Cornet, 1st Ed. p. 10.

3. Annals de Inst. Pasteur, 1905, Vol. XIX; 1906, Vol. XX.

4. Jour. Inf. Diseases, 1905, Vol. II, p. 143.

5. Jour. A. M. A., Edit. November 24, 1906.

6. Kelly and Hurdon, p. 338.

7. Munich Med. Wochenschrift, Vol. LIII, No. 36.

Pyloric Obstruction.*

By W. O. Nisbet, A. B., M. D.; Professor Diseases of the Gastro-Intestinal Tract in the North Carolina Medical College; Physician, Diseases Gastro-Intestinal to the Presbyterian and Saint Peters Hospitals, Charlotte, N. C.

Introduction.

The pyloric portion of the stomach, the head of the pancreas, the uppert part of the duodenum, along with the gall bladder and gall ducts, lie in that zone of the right upper abdomen wherein surgery has done its most brilliant recent work. Yet while the surgeon has done much to relieve the diseased conditions in this region, as well as help clear up their pathology, still there remains a creditable work to be done by the medical man. Hence in considering pyloric obstruction we will find that certain of its forms are amenable to medical treatment, while others are purely surgical.

Pyloric obstruction is a narrowing of the pyloric outlet, which delays or prevents the normal escape of the food into the duodenum. It is not primarily a disease but is a sequence of a number of diseased conditions.

The first form we will consider in this paper is the spasmodic obstruction due to gastric hyperacidity. Here we have a contraction of the pyloric sphincter and adjoining muscular fibres, the exciting cause of which is the presence of an excess of free hydrochloric, acetic, butyric or lactic acids. If arising from free HCL we find that the food has taken up the amount of this acid necessary for digestion, but the gastric glands having acquired the habit of oversecretion continue to pour out the acid, which being uncombined acts as an irritant and excites spasm; to explain the origin of this spasm it is well to recall the physiological fact brought out by Pavlof, the Russian physiologist, that there is a relationship existing between the stomach and bowel digestion: if the stomach contents are too acid the pylorus contracts and will not allow the contents to escape into the duodenum any more rapidly than the juices of the intestine can neutralize them. With this fact in mind, we can very readily see how the emptying of the stomach is abnormally delayed in hyperacidity and how fermentation and irritation and pyloric spasm are favored by what we may call a physiological delay, in addition to that arising from the local effect of the free acid on the pyloric mucosa.

The case which I will now describe is a concrete example of this spasmodic form of pyloric obstruction.

*Read before the North Carolina Medical Society at Morehead City, N. C., June, 1907.

T. H. A., white male, aged 25, musician; is a strenuous worker and rapid eater. Family history clear: heart, lungs and kidneys normal; patient stated that for the past two years he had suffered from headache, epigastric fullness, and burning pain beginning one to two hours after meals, which would terminate in severe cramps several hours later; these cramps are characteristic of pyloric spasmodic obstruction.

This patient was given an Ewald test breakfast and contents for analysis removed one hour later. Result of analysis: Odor acid; mucus absent; HCL, 60; total acidity, 80; combined acidity, 20; Lugol's solution showed presence of starch; lavage showed emptying of the stomach was delayed one to three hours beyond the normal time; this delay, accompanied by cramps, is the best evidence of the pyloric obstruction.

Treatment.—This patient was placed on a diet in which albuminoids predominated; also forbade acids, spices, fruits, tea and coffee. Belladonna was ordered before meals; alkalies after meals; along with Carlsbad salts on rising to control constipation.

Patient was more comfortable from the beginning of treatment, and at the end of three months he reported, saying that he felt practically well; however, I advised him to live hygienically and follow diet for six months longer.

Pyloric Obstruction in Gastric Atony and Gastroptosis.—The second form of pyloric obstruction I would call your attention to is that arising from pyloric kinking in gastroptosis and atonic dilatation; in this type of obstruction there is no inflammatory infiltration of the pyloric mucosa; the obstruction is produced by the traction of an overloaded and dilated stomach or of a ptosed stomach on the fixed part of the duodenum and thereby produces a narrowing of the pyloric outlet, and this is the explanation of the dragging pains which occur 4-6 hours after meals.

The usual clinical course is brought out by the following case:

A. M., minister: age 60; appeared for treatment in August, 1903; family history clear; heart and lungs normal; patient had typhoid fever at 35 years of age and was followed by slow convalescence, and digestion had not been satisfactory since; symptoms grew worse two years ago, and since then was made uncomfortable by sensations of dragging, and fullness in epigastrium; for the past 6 months the patient stated that he had been suffering from, in addition to the above symptoms, severe colicky pains coming on four to six hours after meals; and had lost in all 40 pounds in weight.

On physical examination the lesser curvature of the stomach was found to be two fingers breadth below the tip of the sternum; while the greater curvature was located at a hands breadth below the umbilicus; there was also marked splashing on succussion, and morning lavage showed food taken the preceding evening. Analysis of stomach contents showed H-30; A-80; C-20; odor of butyric acid marked.

Treatment.—Patient was ordered to eat breakfast and dinner and to omit supper; to wash stomach with a 1:500 salicylic acid solution before retiring; no liquids were permitted with meals; breads to be all toasted; meats to be taken as hash or ground and made into sausage or boiled until the fibres fell apart. Medical treatment consisted in ascending doses of nux vomica before meals along with cascara to keep bowels open; also advised one hours rest on right side after meals. In addition to this a properly fitting abdominal bandage was ordered worn night and day. By the use of this bandage the traction on the pylorus, and hence the pyloric obstruction is relieved and the treatment resolves itself into that of motor insufficiency; I would call to your attention the marked physiological rest which is given the stomach in motor insufficiency by allowing only two meals a day along with the complete emptying of the stomach by lavage before retiring; this gives these almost exhausted stomachs 10 to 12 hours rest in the 24. The above mentioned patient gained 25 pounds in six months; pyloric cramps disappeared; and the stomach was empty six hours after a full dinner; and the greater curvature had ascended to within a fingers breadth of the umbilicus; I do not believe that these ptosed stomachs ever completely regain their normal location.

A third and more common condition which pyloric obstruction complicates is pyloric ulcer; pyloric ulcer clinically occurs in two forms; (a) the acute, round ulcer and (b) the chronic indurated ulcer; in acute ulcer, the pyloric obstruction is produced by a spasm of the pyloric portion of the stomach, excited by the irritant action of the hyperacid contents on the nerve endings in the ulcerated area; if properly treated a goodly percentage of acute ulcers will permanently heal, and the pyloric obstruction disappears.

Chronic Indurated Ulcer.—This form is more extensive in area than the acute and usually involves all the coats of the stomach and may cause sufficient inflammatory infiltration to partially at first, and later, completely prevent the food from passing into the duodenum; the stomach for awhile can overcome by hypertrophy this pyloric resistance but as the heart finally dilates in

the face of the stenosis of its orifices, so somewhat similarly with the stomach in pyloric stenosis; and it matters not whether the obstruction be due to spasm, inflammatory infiltration or the contraction of the cicatrix of an ulcer, if the obstruction be continued long enough, it will eventuate in dilatation.

The leading clinical symptoms and diagnostic signs of pyloric obstruction in chronic and acute ulcer are exemplified in the two following cases:

J. M. G., white male, aged 26, clerk at a restaurant lunch counter; patient stated that he was a rapid and frequent eater and was fond of fried foods, and that he had long hours of service and little outdoor life; family history, clear; patient appeared well nourished but was anaemic; in giving history of his case patient stated that for 12 months he had suffered from pain and fullness in the stomach which came two to three hours after chief meals; pain was made severe by acids and condiments and was relieved by alkalies (this is the pain of hyperacidity); patient also stated that within the past three months there had been a change as to the time of appearance of the pain, in that the pain appeared within a half hour after taking food and was relieved by vomiting (this is characteristic of the pain of ulcer) and that, furthermore, when there was no vomiting the pain grew most intense three to four hours after meals and was like colic (this is the pain of pyloric obstruction). It is very seldom that we find the stages of pain so typical as in this case. Physical examination revealed the presence of the dorsal and epigastric tender points of ulcer. As it was not deemed safe to use the stomach tube, the patient was instructed to take a test breakfast and try to retain it for a half hour; this he did and then vomited enough for analysis; the analysis showed HCL-45. Three days after being put to bed on milk diet a test of the stool showed occult blood.

This case made satisfactory recovery after five weeks course; the pylorospasm disappeared after the first week of treatment.

The next case illustrates the pyloric obstruction from chronic indurated ulcer.

M. A. P., white male, aged 29, family history clear; three years ago case was diagnosed gastric ulcer and was given ulcer cure and grew better; later symptoms returned and was treated again, with only slight improvement; when seen by me examination revealed circumscribed tenderness over the pylorus; the lesser curvature of the stomach was in normal place but the greater was a fingers breadth below the umbilicus. It was found also that the stomach emptied itself fairly well of liquids but that solids caused severe cramps three to four hours after ingestion. A diagnosis of pyloric obstruction from chronic ulcer was made and the patient sent to a surgeon who did a posterior gastro-jejunostomy and there was found a saddle ulcer of the pylorus. Patient made a prompt recovery and in three months had gained 25 pounds in weight. It would be interesting to follow the history of this case and see if there has been established a vicious circle from loop formation. It appears that some of the cases where the posterior operation has been done that after an apparent cure lasting for a number of months, this loop complication develops and as yet we have not found the ideal operation.

Pyloric Obstruction from Carcinoma.—A fourth form of pyloric obstruction is that occurring as a consequence of benign and malignant tumors of the pyloric portion of the stomach. Benign tumors in this region are so infrequent that we need not consider them. Pyloric obstruction from carcinoma is of frequent occurrence and gives its most marked symptoms late in the disease. The leading symptoms are stagnation and retention of food, with vomiting occurring every 24 to 48 hours owing to the inability of the contents to escape through the pylorus; but the dominant symptom is the severe cramps engendered by the efforts of the stomach to overcome the resistance. Liquids are better borne than solids. A glass and a half of water in the earlier stage will leave the stomach in two to three hours, while a meal of solids will be retained five to eight hours.

Treatment.—Treatment is surgical and palliative. Surgical treatment promises little unless operation is done early—done before adhesions to the surrounding organs have taken place and before the cancer toxines have saturated the patients system. Early operation necessitates early diagnosis and this brings up the question, how are we to get these cases in the hands of the surgeon early enough to offer the patient any hope of prolonging his life? The best answer I can give to this question is this: that we are perhaps justified in advising an exploratory laporotomy, with preparation to do a pyloric resection, based on the following conditions: If there comes into our hands a patient who is past middle life, and who has had no digestive derangement preceding the present trouble, and if we find there has been persistent loss of weight, strength and appetite, especially appetite for meats, and if there is an absence of free HCL from the stomach contents; and also if there is no discoverable disease of other organs to account for the symptoms; then we should put this patient to bed and give the treatment which will ordinarily improve

chronic gastritis, which is the only stomach disease to exclude, and if at the end of six weeks there is no improvement then we should advise exploratory incision.

By following this course some non-malignant cases might be subjected to exploration; while on the other hand, many cases which now go surely to death would have their lives prolonged.

My personal experience with cancer is this:

In 843 cases of gastro-intestinal disease of which I have record, I have found cancer in 36; of the 36 malignant cases pyloric cancer and hence pyloric obstruction existed in 16; and in all save three of the 36 the disease was beyond the operative period when first seen. It would be interesting to know the experience of the other members of the society on this point.

In conclusion I would say that the palliative treatment of pyloric obstruction due to cancer consists in relief of the food stagnation by regular stomach washing; nutritious liquid diet and the bitter tonics.

Other Forms.—There are still other forms of pyloric obstruction, such as that produced by the contraction of the cicatrices of pyloric ulcer; and a form which occurs in chronic hypertrophic gastritis; also a form produced by adhesions following perigastritis and plastic peritonitis and a pyloroduodenal form produced by the spasm, pressure and pain of cholelithiasis and cholangeitis, but it would unduly prolong this paper to consider these.

Conservative Prostatectomy.†

By V. J. Crowell, M. D., Charlotte, N. C., Professor Genito Urinary and Rectal Diseases in the North Carolina Medical College; Visiting Surgeon to the Presbyterian Hospital, Charlotte, N. C.

While there is a great deal of discussion going on, both in this country and abroad, as to the preferable and more scientific operative procedure for the relief of prostatic obstruction, it might be well to mention briefly a few vital points that make the perineal route preferable to any other. Until within a year ago I had done only the perineal operation, but after hearing such men as Dever, of Philadelphia, Bryan, of Richmond, and Messrs. Frayer, Pardoe, and Walker, of London, advocating the suprapubic route and reporting such brilliant results, I decided to give this plan a trial. At first the results were very gratifying but finally lost a case from hemorrhage which occurred while the patient was being moved from the operating room to his bed, continuous irrigation having been discontinued during this time. Soon after the patient was returned to his room it was found that the bladder was distended with blood, making it impossible to re-establish continuous irrigation. The wound was at once opened, clots removed and the bladder flushed with hot normal salt solution. Failing to control the hemorrhage in this way, the bladder was packed with gauze which controlled the hemorrhage, but the patient, a very feeble man of 76, died of shock within six or eight hours. After this experience and remembering a similar one seen at St. Peters Hospital, London, and having had no such experience by the perineal route this plan of operation was at once abandoned.

When the location of the gland is considered one can readily see that such an operative procedure is unsurgical and unscientific. As you are aware it surrounds the urethra just anterior to the vesicle sphincter and is composed of three lobes, a medium and two lateral, covered only by the bladder wall above. It is placed in the pelvic cavity below the symphysis pubis posterior to the deep perineal fasca and its under surface rests on the rectal wall to which it is attached by a dense areolar tissue. This location makes its accessibility from the perineum somewhat difficult without a perfect knowledge of the anatomy of the parts. This, and the somewhat vague knowledge of the proper technique of the operation and the want of proper instruments, have prevented its receiving the endorsement it so justly deserves. It is the authors purpose to present the operative procedure that makes the perineal route preferable.

As the operation is usually done, it is much easier to gouge the gland out through the bladder than through the perineum, but after it is removed the trouble has just begun. Perfect drainage is almost an impossibility through the suprapubic route and thorough drainage of septic cavities is indispensable when best results are obtained. The genius of man has been brought into action in devising plans for draining the bladder through the suprapubic opening, but all have fallen short of that obtained through the most dependent point. As yet all plans devised cause irritation of the bladder and abdominal wall and keep up suppuration and prolong convalescence. In the first place, in this operation the lymphatic and blood vessels are left open for the absorption of bacteria which are likely to be carried to other parts of the body. 2nd. It is necessary to tear up the bladder wall considerably and almost certainly destroy the vesicle sphincter and leave the patient at the mercy of the compressor urethrae muscle as a safeguard against incontinence of urine. 3rd. It is almost im-

†Read before the North Carolina Medical Society, at Morehead City, N. C., June, 1907.

possible to save the ejaculatory ducts. 4th. The danger of hemorrhage following this operation is far greater. 5th. And most important of all the length of time necessary to keep the patient on his back and subject him to the dangers of hypostatic pneumonia, sepsis, bed sores, epididymitis, etc., should he escape immediate death from shock or hemorrhage to say nothing of the unpleasantness to the patient of being constantly bathed in his own urine and the arduous task of changing dressing and bedding three or four times daily. The shock is certainly greater in the suprapubic than in the perineal route. In St. Peters Hospital, Loedon, where they do only the suprapubic operation (and they do a great many, as their work is limited to Genito-Urinary Surgery) the average length of time a patient remains in the hospital is about four weeks, and a good part of this time is spent in bed. Zuckerchondal, of Vienna, does only the perineal operation. However, he makes only one incision into the capsule and removes the gland without regard to the ejaculatory ducts. In this particular Dr. Youngs operation, which enables one to save the ejaculatory ducts, is preferable for this reason: It is not uncommon to find cases of prostatic hypertrophy in young men with complete retention, and is therefore important to preserve these ducts and thus save the man sexually. The operation is as follows:

The patient is placed in the exaggerated dorsal lithotomy position, the perineum being almost parallel with the floor. A No. 24 F. sound is placed in the urethra as a guide before the patients limbs are flexed, as it is difficult to introduce afterwards. An inverted V shaped incision is made through the skin, fat, and superficial fascia over the posterior part of the bulb backwards on each side of the rectum, stopping midway between the anus and ischial tuberosities. The handle of the scalpel is then used on each side of the central tendon to open up the space back of the bulb and in front of the levator ani muscles. This blunt dissection should be carried well down behind the triangular ligament on each side before severing any muscular structure. The bifid tractor is inserted and traction made which exposes the narrow band of central muscle and facilitates its division close to the bulb. Care should be taken not to puncture the bulb, as this would cause hemorrhage. A tractor specially devised to lift the bulb and triangular ligament up is inserted and by this means a better view is obtained of the recto-urethralis muscle, which lies behind the levator ani muscles and covers the membranous urethra and apex of the prostate. This muscle is responsible for the acute anterior flexure of the rectum and holds it closely against the apex of the prostate. In order to reach the membranous urethra it is necessary to divide it by transverse incision close up to the triangular ligament. The membranous urethra is exposed by blunt dissection. The bifid tractor is now removed and the posterior retractor is inserted to separate the levator ani muscles and displace the perineal body and rectal wall backwards. The membranous urethra is opened and the edges caught with Holsted clamps. The prostatic tractor, with blades closed, is inserted into the bladder, then opened and fixed by tightening the thumb screw. The instrument is now ready for whatever traction may be necessary to bring the prostate well down into the wound. The lateral retractors are so placed that with the posterior one drawing the rectum backward, a complete exposure of the entire surface of the prostate is obtained. In order to avoid the ejaculatory ducts and separate the prostatic urethra from the gland two divergent incisions along the entire length of the posterior surface are made and carried well down on either side of the prostatic urethra. The next step is the separation of the capsule externally from the lateral lobes which is accomplished by a blunt dissector. It is most important to get well under all layers of the capsule in order to shell the gland out easily, otherwise it will be extremely difficult. The internal enucleation, that is, the separation of the gland from the prostatic urethra, is next taken up. This is much more difficult and great care is necessary to avoid opening up the prostatic urethra. Firm adhesions to the lateral lobes of the capsule are frequently present and require division with scissors. When the enucleation of a lateral lobe has progressed fairly well on each side it is advantageous to have traction made on the lobe itself with the forceps. The lobes usually come out in one piece. Most of the enucleation is done with the blunt dissector, but when the intra-vesicle portion of the lateral lobes are reached it is usually better to separate the gland from the capsule with the finger to avoid tearing through the mucous membrane covering it. The intra-vesicle blades of the tractor can be distinctly palpated through the mucous membrane with the finger and serves as a warning against tearing the bladder. It also enables one to palpate any portion of the lobe that may have been left behind after the lateral lobes have been removed. The prostatic tractor is next pushed backward into the bladder and rotated 90 degrees and then the median lobe engaged by one blade of the instrument and brought down into plain view.

The index finger of the left hand is inserted into the right intra capsular cavity and the gland pushed to the left where the major part is removed after separation from the capsule and prostatic urethra, leaving only sufficient amount of the gland to avoid the ejaculatory ducts. A very large median intra-vesicle lobe can readily be removed in this way, therefore not considered more suitable for suprapubic prostatectomy. Occasionally one finds when the index finger of the left hand is inserted into the bladder it can be used to advantage in removing the middle lobe. After a thorough examination to be sure that all the gland is removed the retractor is closed and removed, two catheters of fairly good size are then fastened together, inserted through the urethra into the bladder and tied by silk sutures to the skin at the upper angle of the wound. The lateral prostatic cavities are firmly packed with a small strip of gauze. A gloved finger should then be inserted into the rectum to search for lacerations. If a tear is found, carefully close with interrupted fine silk sutures, or at least two layers should be of silk and the third catgut. The levator ani muscles should be drawn together in their normal position in front of the rectum which guards against stuffing of the rectal walls. The skin wound is now closed, leaving a small area in front for gauze and tube drainage. Continued irrigation with a hot normal salt solution is kept up until the water returns perfectly clear, and then at short intervals for 24 hours. A subnammary infusion of 1000 c.c. salt solution is given while the patient is on the operating table which prevents shock, anuria and postoperative thirst. The gauze is removed on the day after the operation and no more packing put in. The tubes are pulled out a few hours later and the patient is usually placed on a wheel chair and carried out doors the next day. If this operation is carefully done, the only opening into the bladder is through the membranous urethra, the patient generally controls his urine within three or four days and the perineal wound entirely closes in ten to fifteen days.

Adenoid Growths.*

By J. R. McCracken, M. D. Waynesville, N. C.,

In this brief paper I wish to consider this subject from the standpoint of the general practitioner, because it is through him that the majority of cases reach the hands of the specialist. I have chosen this subject because it is a very common condition and altogether too often neglected, or entirely overlooked by the average practitioner of medicine. The term "Adenoid Vegetations" was given these growths by Myer, who first described them in 1868. I regard this as a most important subject, for it is perhaps the source of more discomfort, and the origin of more minor ailments than almost any other pathological condition of childhood. Adenoids are growths resembling tonsillar tissue, and are situated in the vault of the pharynx, being often called the third or pharyngeal tonsil. These growths vary in size from small vegetations, causing no inconvenience, to large masses sometimes completely occluding the naso-pharynx. In infancy they are soft, vascular and spongy, but as childhood advances they become firm and are more fibrous, and in fully one-third of the cases are associated with hypertrophied tonsils.

Etiology.—Adenoids are common in the community, and are especially peculiar to childhood and often effect several members of the same family. They are particularly associated with the condition known as "Lymphatism," or the "Status Lymphaticus." In a great many cases the condition is congenital, but as a rule the hypertrophy becomes manifest about the third year and continues until about the fifteenth year, when atrophy begins to take place and the symptoms to subside. Some writers think that tubercular subjects are especially predisposed to adenoids, while by others this is doubted. Most cases that I have known were non-tubercular.

The first symptoms of this affection usually follow an attack of measles, scarlet fever or diphtheria, and the habitual "colds in the head" are perhaps the effect rather than the cause of the condition.

Symptoms.—The symptoms of adenoids are usually first noticed when the child is from eighteen months to two years old, and about the first thing noticed is obstruction to nasal respiration accompanied by naso-pharyngeal catarrh. The principal symptoms are: Mouth breathing, inability to blow the nose, nasal voice, deafness, and certain reflex nervous symptoms. These are also accompanied by anaemia and malnutrition. The mouth breathing is the symptom that usually causes the physician to look for the condition. Mouth breathers always sleep badly and difficulty in breathing is increased when lying on the back, the child is continually changing position and is subject to the so-called "Night Terrors." The appearance of a patient with adenoids is characteristic, there is a dull, listless expression on the face that is not often mistaken and the child is often hard to get to take notice. The lower part of the chest is depressed on each side with a prom-

*Read before the Haywood County Medical Society, May 6, 1907.

ment sternum giving rise to the condition known as "Pigeon Breast," this is due to incomplete expansion of the lungs. The catarrhal symptoms are always worse in winter than in summer and this predisposes the child to bronchitis and pneumonia. Impairment of hearing most always exists and may be due to catarrh of the Eustachian tubes, or to pressure and obstruction by the growth, perhaps to both. The most important of the reflex nervous symptoms is the attacks of spasmodic croup, which often accompany this condition. Other nervous symptoms are headaches, chorea and enuresis. These patients are always regarded as dull in school because they lack the power of concentration of thought. These symptoms usually begin to subside about the fifteenth year, but if the condition is neglected until that age permanent injury is already done to both mind and body.

Diagnosis.—The diagnosis of adenoids is usually easy. The symptoms already mentioned lead the physician to make digital exploration of the naso-pharynx where the growth is easily detected. The use of the Rhinoscopic mirror is a valuable aid to diagnosis and should be used when at hand. The size, location and number of growths can also be determined by a careful digital exploration.

Prognosis.—As far as danger to life is concerned the prognosis is good and as already mentioned the growths have a tendency to undergo atrophy, beginning usually about the fourteenth or fifteenth year, but if they are of large size they perhaps never entirely disappear.

Treatment.—The treatment of adenoids is almost purely surgical, as disappearance by absorption is possible only when the vegetations are very small; this can sometimes be aided, however, by removal to a warm dry climate for the winter season, and by careful attention to hygienic conditions. Specific care should be taken to prevent the patient taking cold. Cod Liver Oil should be administered, and some authors claim good results from the use of Syr. Ferri Iodidi given in good size doses three times a day. But the absorption of tumors of any size is a delusion, and the only relief in such cases is in operation. According to Holt operation is indicated when there is persistent mouth breathing, chronic nasal discharge, habitual colds, attacks of croup, asthma, or deafness. The preferable time for operation is in the spring or early summer so that the injured mucus membrane will not be exposed to cold while healing. The child should be at least two years old, but if symptoms are distressing it may be done earlier. It is sometimes possible to remove the tumor with the finger, especially when it is soft and spongy, and the base of attachment is not too extensive, but, in my opinion, these finger operations should be discouraged, since they are so often incomplete, and if the entire growth is not removed permanent relief is not obtained. The patient, in my opinion, should always be anaesthetized, as the pain, blood and excitement often cause mental shock. The mouth should be held open by a mouth-gag, which may be replaced by a large sized cork. The patient is held preferably in a semi-erect position to prevent the growth or blood clots from entering the larynx. The only instrument required in this operation is Gottstein's improved adenoid curette. The child's head is held with the left hand, while with the right the instrument is held as if holding a pen, the curette is passed up behind the palate until it comes in contact with the nasal septum, the cutting part is pressed downward and backward while the handle is elevated, the blade of the instrument is held firmly against the bony vault while the sweep is being made. Sometimes two or three sweeps are required to make the operation complete, and the cavity should always be explored by the finger after the use of the instrument, to see that none of the growth has been left. The tumor often drops into the pharynx and is swallowed. Bleeding is most always profuse, and as soon as the operation is done the child's head should be lowered and its face turned downward; bleeding, however, usually ceases in a few minutes. No after treatment is necessary, but you may order a spray of some mild antiseptic solution; this will have a good effect on the minds of the parents, if nothing more. The good effects of the operation are usually manifest in a few days, breathing becomes freer, sleep more quiet, mouth breathing ceases, voice and hearing improve, and in a short while the general appearance undergoes a marked change for the better.

Many cases of adenoids are neglected because parents are unable to take their children to the specialist, and as long as we general practitioners refer all such cases to the specialist these conditions will continue to exist. This is a simple operation and one that any physician can do, if he understands the anatomy of the parts and is not afraid of blood.

Address of Hon. Chas. P. Pressly, Esq., at Commencement Exercises of the North Carolina Medical College in the Academy of Music, Charlotte, N. C., April 16, 1907.

Mr. President of the North Carolina Medical College; Young Gentlemen of the Graduating Class, Ladies and Gentlemen:

A priest was the first physician of history;

and the first hospital was a temple in a sacred grove. The earliest school of medicine was founded by the Pastophori, a Sacerdotal order of ancient Egypt; and the last six volumes of their sacred book of Hermes were devoted to the curative art. "Civilization descended the Nile," and the dawn of medical science broke over the Nubian plains from beyond the Syrian hills. And strange, young gentlemen, it was an Egyptian woman, Polydamna, wife of Thonis, who is celebrated in history and song as one of the first and greatest in your profession. Homer tells us she treated, with medicinal herbs, the famous Helen of Troy. The Levites were the physicians of ancient Israel; and the Talmud stands today a remarkable treatise on practice and hygiene. The Rabbis were among the first to reconstruct from the bones of the dead the mysterious framework of the human body, and to count as many as two hundred and fifty-two bones in the human skeleton. The book of Leviticus is an excellent compendium of rules for the promotion of public health. The Brahmins, the priest-physicians of ancient India, compiled the Azur Veda, the holy book of the Hindus containing perhaps the earliest recorded system of materia medica. They taught and prescribed a rigid regimen of dietetics, and transmitted rhinoplasty to modern surgery. The Brahmins belonged to the highest social and religious caste and were licensed to practice, after years of careful training, and after most satisfactory proofs of personal decorum and personal piety. Aesculapius, the Grecian god of medicine, is still revered as the great prototype of the healing art; and his face and form are yet preserved in the symbols and traditions of your profession. Grecian priests were the physicians in charge of the ancient Temples of Health; and it was in the famous Asclepion on the Island of Cos, that Hippocrates, the father and founder of rational medicine, devoted the many years of his life to the relief of suffering humanity. It was an order of Nestorian monks who discovered in the desert wastes of Arabia the therapeutic qualities of camphor, senna, manna and cassia. In more modern times there was, to the devout, a patron saint for every limb of the human body; and each of the fourteen joints of the fingers was dedicated to a separate divinity. With the traditions of your profession, my young friends, are mingled the songs of enchantment, the prayers of priests and the incense of altars; along the pathway of its glorious progress still stand the ruins of the shrines and temples of the gods. But, gentlemen, the sublime, the supreme sanctity of your vocation is found in Him who came down from heaven and dwelt among men, the fruition of human hope, the fulfillment of all divine prophecy. We are told that He healed the sick and cast out devils; and there are no more beautiful scenes in all the splendid history of medical science than that of Christ as He sat, the family physician of Mary and Martha; as He rebuked the disease of the Syro-Phoenican woman; or as He spoke vision to the sightless eyes of Bartimeus. In the light, then, of the sacred origin and past of your vocation, you assume a most solemn responsibility in entering upon your life's work. Yours is a professional lineage, which is traced back towards the very dawn of time; beyond the days of Kings and Princes. Your art was for a thousand years the hand-maid of religion and the elder sister of philosophy. It wrapped the mummies of the Pharoahs in the cerements of an earthly immortality, and imbedded its principles as sacred treasures in the old dispensation of God's Holy Word. The heroes of medicine have brightened and blessed every epoch of history, and have in every age brought hope to the hopeless, sleep to the suffering and life to the dying. You have a prestige to maintain, older and nobler than that of the Ptolemies or of the Caesars. The discoveries and achievements which emblazon the pages of medical science are more glorious and lasting than the jeweled decorations of courts or the glittering trophies of conquerors. The battles of medicine have been fought for human health and for human life, and its victories have been won over disease and death. Think of the multitude of the wounded and broken in body, limb and spirit that have slept and sleep tonight under the soothing influence of your art; think of the thousands of human lives that have been saved by anti-toxine, by vaccination; think of the tens of thousands rescued from the brink of the grave by the timely use of anaesthetics and the surgeon's knife! Such, then, is the historic heritage you have received. What solemn, sacred responsibilities does it impose! What an inspiration should such a past be, as you stand tonight with your faces to the future!

Some one has well said that to advise is one of the most agreeable forms of human fallibility. To this charge I wish to file tonight a plea of confession and avoidance. Benjamin Franklin, in closing a long letter of counsel to a friend, once wrote: "Pray do not consider what I have written you in the light of advice, but merely as an expression of my interest and good will." So, I beg that you will accept what I shall say, not as advice, but rather as an earnest, sincere expression of my interest and good will.

The physician's responsibility is, with

one exception, the most serious and vital of that of all the professions. Responsibility, as its etymology indicates, is man's response to the call of duty. We are responsible creatures, whether we will or not; and even against our will. From the imperative demands of duty there is no evasion, no escape. By virtue of birth we are invested with certain obligations of family and society without our choice or consent; we become subject to the custody and control of parents; become citizens of the State, and amenable to its laws. We are responsible for the opportunities of life and for the Christian civilization by which we are surrounded. How much more binding, then, are the responsibilities of our own selection! When you, young gentlemen, after years of preparation and study, deliberately and publicly, choose the field of your life-work, and then receive and accept a commission containing all the conditions and obligations of the history and character of your profession, you thereby pledge your honor to make a manly response to duty's call. In accepting that diploma under the seal of your school and under the signature of your masters, you thereby obligate yourselves to maintain, like men, the splendid record and traditions of your vocation, to know its science and to practice with fidelity its art and its ethics. In assuming the duties of a profession, the public has a right to expect you to be at least professional. In entering upon the vocation of the gentleman in all ages you should demean yourselves like gentlemen; you should be courteous and kind. In ministering to the sick, the suffering, the dying, you should be attentive, gentle, sympathetic. In studying and treating the body of man, you should be manly, humane. In observing the confidences of your profession, you should stamp upon them the seal of inviolability, which the law itself requires and demands; the confessional of your cult should be as sacred as the inmost secrets of your own soul.

It has been estimated that if Pasteur had taken patents upon his discoveries he would have left millions to his posterity; but he would have scorned the suggestion. His mission was above money; his duty was above dollars; his profession was one of universal philanthropy. The "I" should be the third and last pronoun in the grammar of your life. The title of M. D. does not mean "my doctor," for me and mine. Yours is the sacred, proper study of man; your first obligation is to the sick, the suffering, the dying; yours is the holy crusade against disease and death. In this warfare there is no furlough, no honorable discharge. You have enlisted for life, with campaign equipment upon you. Forward is the watchword! Rise and march on, then, my young friends, to the high calling of your profession.

There is some wisdom, but too much extravagance of language, in the remark of President Hadley, of Yale, that, "to be well educated, one should know something of everything and everything of something." It seems to me rather safer and saner to caution you against trying to know everything of anything, unless of your own profession. Know thoroughly all the fundamentals, if you would grow and expand professionally. You should not give too much time to the morning paper, the latest novel or to local politics. Don't spread yourselves out too thin. Concentrate on a few things; the best educated men do not know everything. Remember that "it takes work to get an education; work to use it and work to keep it." "In the sweat of thy brow," is man's patent of nobility; the law of his life; the condition of his success. Your class motto is most appropriate: "Ich Dien—I serve." To it I would add the simple, strenuous English words—"I work." Medicine is more of an exact science and less experimental than it has ever been in the history of the world. You, doctors, have less excuse for trying dangerous experiments on the sensitive body of man than ever before; with all your voluminous encyclopedias of medical knowledge, your countless reported cases in every field of investigation and practice, with so many marvelous facilities for discovering, treating and removing the causes of disease. The obligation to work was never more imperative; the duty to know was never more vital; the *ultima thule* of your art has not been reached; there are diseases unknown to your science; there are fields of pathology yet unexplored, undiscovered. In the secrets of nature there still lie undisturbed panaceas unknown to modern therapeutics. A thousand formulae will be added to your pharmacoepia. Surgery has not attained its limits yet, even in this day of transplanted kidneys. The future of your profession looms up before your vision, as rich in field and in fruits as did the Land of Promise to the eyes of the wandering Israelites of old. Though the canon of your professional scriptures is not closed, yet there is in them already the garnered wisdom of an old and a new dispensation. The veil of mystery has in a large measure been stripped from the human body; the arcana of nature and disease have been disclosed; the healing elixirs of the vegetable world have been extracted for the comfort and cure of the suffering; animal life has been freely offered on the altar of your profession;

and the buried treasures of the mineral kingdom have been poured as a golden stream into the laboratories of your art for the relief and salvation of human life.

But, my young friends, in your studies and research, you should not overlook or despise the small things, the odd things, which concern your art. It was the casual remark of an English milk maid, which suggested the theory of vaccination to the mind of Jenner. The most primitive elements and remote incidents have a place, and teach useful lessons in the broad purpose of medical science. Diet, water, exercise and fresh air, the last and saving prescription of the modern practitioner, was the first tonic administered by nature to prehistoric man. These simple elements are the leaves from the tree of life and are given without money and without price for the healing of the nations. The curious and rare are not objects for the museum alone. "In monstrosities and dermoid cysts, for example, we seem to catch forbidden views of the secret work room of nature, drag out into the light the evidences of her clumsiness, and proofs of her lapses of skill; evidences and proofs, however, that tell us much of the methods and means used by the vital Artisan of Life, and show us the loom and even the silent weaver at work upon the mysterious garment of corporeality."

Even the isms and opathies of your profession are worthy of your consideration. Don't do as the theological professor did about geology, read only the objections. Homeopathy was a valuable protest against the vampiric practice of venesection and against colossal doses of drugs. It has taught some, at least, that, "for forms of medicine, let fools contest; what's least administered is best."

Osteopathy, after years of exclusion and wandering in the street, has at last been received into limited fellowship; has emphasized the importance of the spinal column as the conduit of the live wires of physical disturbance; and has applied scientific athletics in the treatment of disease. Moral therapeutics have reappeared as a modernized, improved form of the ancient religious ceremony practiced in the Asclepia of ancient Greece. Moral suggestion, as applied by Rev. Dr. McCombs, of Boston, has given remarkable results in the relief of the neurasthenic. Dr. Quackenbos, of New York, has made a moral and physical application of hypnosis, and claims to have cured stubborn cases of bad temper by the mesmeric influence of his art. Irritability is largely the symptom and result of nervous rather than moral disorder, and, like headache, may be soothed and dissipated by hypnotism or friction.

Even music has its place in your profession, and, most appropriately, is made a feature of this evening's programme. It may in a measure enliven the remarks of the layman, compose the nervous and stimulate the sleepy. We are told that "David with his harp charmed away the evil spirit of Saul." "O! of our troubles, the sweet and healing sedative." "Joyful music resounds along the excitomotor fibres," and brings light, hope and comfort to the neuritic spirit.

But in this discharge of his duties the physician does not stand alone. The community, the well and the healed, have their responsibilities in this mission work of humanity. All honor to the devoted women who have established and are struggling to maintain a splendid home for the sick in your midst. All honor to the churches and cities which are sustaining these temples of health throughout this land. If some of that recent enormous gift of thirty-two millions given to education, worthy object though it is, had been devoted to the erection, equipment and maintainance of hospitals, particularly in our beloved Southland, with its multitude of destitute sick, white and black, it would have been a nobler, greater benefaction.

It has impressed me as strange that there are in our cities so few monuments to the great dead of your profession. I am told that the Hahneman memorial is the only creditable one in our national capital. This should be a subject of discussion and action by your medical societies and associations. Brutus should not be without a monument in Rome.

Allow me to suggest, gentlemen, a medical tour, not merely a sentimental journey, but one of simple respect and reverence to the fathers and founders of your profession. The American Medical Association might appoint a committee to make a pilgrimage to the Far East; to visit Jerusalem, the historic city of holy writ; the ruins of ancient Memphis, where once stood the first medical library of the world; Alexandria, the site of the first school of medicine; the Island of Cos, the home of Hippocrates; Pergamum, the native city of Galen; Rome, the mecca of the faithful in every field of science; thence returning to the land of Paracelsus; of Harvey; of Hunter; of Sydenham; of Lister; of Virchow; of Pasteur and Charcot. The report of such a committee would read like a lyric and inspire like a message from a better world.

Young gentlemen, I have here an oath which I shall not require you to sign; but I shall request you to take it home with you

as a memento of this occasion, as a companion-piece to your diploma. You are doubtless more or less familiar with its history. It is a noble, a priceless relic of your profession, coming down to you from a remote past of two thousand four hundred years. It is the oath drafted by the School of Hippocrates, under his direction, which every Greek physician was required to take and subscribe before entering upon the practice of medicine. It is a most remarkable document, perhaps the most remarkable in the ancient archives of your profession. I commend to you most earnestly its lofty sentiments, its solemn obligations. Make it the motto of your lives.

Hippocratic Oath.

I swear by Apollo, the physician; by Aesculapius, by Hygeia, by Panacea, and by all the gods and goddesses, that I will fulfill religiously, according to the best of my power and judgment, the solemn vow which I now make. I will honor as my father the master who taught me the art of medicine; his children I will consider as my brothers, and teach them my profession without fee or reward. I will admit to my lectures and discourses my own sons, my master's sons, and those pupils who have taken the medical oath, but no one else. I will prescribe such medicines as may be best suited to the cases of my patients, according to the best of my judgment; and no temptation shall ever induce me to administer poison. I will religiously maintain the purity of my character and the honor of my art. I will not perform the operation of lithotomy, but leave it to those to whose calling it belongs.

Into whatever house I enter, I will enter it with the sole view of relieving the sick, and conduct myself with propriety towards the women of the family. If, during my attendance, I happen to hear of anything that should not be revealed, I will keep it a profound secret. If I observe this oath, may I have success in this life, and may I obtain general esteem after it; if I break it, may the contrary be my lot.

A Resume of the Insanities.*

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Introduction.—In the average physician's mind the subject of insanity is not clear cut. Frequently there has been inadequate training at college with little or no opportunity for practical observation or post-graduate study. Seldom has the physician's interest in this branch of medicine been sufficiently acute to induce him to take advantage of such opportunities as are offered; and, unfortunately, the wilderness of classifications has been such as to discourage any but the special student.

The object of this paper is to review rapidly and, I trust, concisely, the essentials of the subject, and to present the newer, better, simpler, grouping of mental disorders, with such practical points as may be helpful to the general practitioner.

Definition.—Few definitions are more inadequate than those which have been made to describe insanity. Of the many given, the following are as simple and practical as can well be:

"Insanity is a disease, derangement or defect of the brain, causing disordered action of the mind," or

"Insanity is a prolonged departure from an individual's normal standard of thinking, feeling and acting."

The second definition has the advantage of emphasizing the fundamental fact that insanity implies conduct peculiar to that individual. As, when a man has lived a God-fearing, dignified life till he is fifty, and suddenly becomes profane and abuses his family, these acts are insane to that individual; while they may be identical with the life-long practices of his neighbor, who would be considered equally "queer" should he suddenly join the church, be constant in public and private devotions and devote his time to the soul welfare of others.

Etiology.—That mental disorders are on the increase in civilized lands cannot be questioned. In our country one person in three hundred suffers with some mental trouble.

Heredity.—Practically fifty per cent. of all insane inherit the tendency which determines their mental frailty. Mental weakness on the part of the mother is more prone to be transmitted than paternal defects. The stigmata bequeathed the offspring may be anatomical, as found in idiots; physiologic, as in adolescent insanity; or psychic, as in the morally defective.

Civilization.—Second only to the known effects of heredity, and associated with it, are the damaging influences of our vaunted modern, ill-balanced civilization. The wear and tear of over-stimulation in the mad rush for gain and supremacy creates a strain which predisposes to insanity every mind below a certain grade of mental stability. Imperfect discipline in the child's rearing usually means deficient self-control in the adult; and no engine is safe without its governor.

Strain.—Under the general head of strain, we may rapidly review the chief determining causes of mental breakdown. Physically the toxins are extremely damaging to

*Read before the Buncombe County Medical Society.

nerve tissues. The list of toxic insanities is long, including the alcoholics, the insane from lead poisoning and from morphine. But, more insidious and far more frequent are the breakdowns which result from accumulations of autochthonous poisons. Physiologic chemistry has not yet made clear the chemistry of normal excretion. Still more obscure is the chemistry of defective metabolism, and many are the cases whose nerve cells are being daily saturated by the poisons elaborated within the patient's own tissues to his mental destruction. We do not know much when we discover this patient is eliminating an excess of indican or a deficiency of urea. Inadequate as this knowledge is, however, it points us in the right direction. Certain physical diseases, particularly syphilis, are instrumental in causing insanity. Trauma is also an occasional cause.

Exhaustion.—Closely following as a cause, often associated with the toxicity, is exhaustion. Every one has his limit of endurance, his tensile strength. If he subjects himself to strain beyond this point, disaster is inevitable. He is indeed fortunate whose body breaks, rather than his mind.

Physiologic.—The physiologic crises are more marked in woman than man; still in both sexes the periods of puberty, adolescence, the climacteric and senility prove shoals upon which this bark or that is stranded.

Psychic.—About one-quarter of all cases of insanity are recorded as due to moral causes, among which are grouped domestic troubles, grief over financial loss or death, disturbances due to disappointment in love, business worry and nervous shock. It is hard to conceive, however, of any of these factors, alone, unhinging a well-balanced mind.

Pathology.—One of the most unsatisfactory conditions met with in the study of the psychoses is its miserable poverty of definite pathological lesions. In many cases, indeed, there are clear-cut congenital stigmata; while both brain lesions and a well-defined pathology exist in general paresis, and frequently the secondary dementias show pathologic reasons for the defective intelligence, still in forty per cent. of autopsies of mental cases no lesion is discernible. Many of the disturbances found in the cortical neurons are frequently duplicated in examinations made on brains of mentally normal individuals, and are doubtless agonal, or mechanical disarrangements due to our faulty technique. So, unfortunately, for the present we are forced to say that a large percentage of mental diseases are functional; and it is probably safe to add that a large majority of the functional cases are due to auto toxic irritants which either over-stimulate or inhibit ideation, or interfere with conduction and thereby disorganize thought-association.

Symptomatology.—The symptomatology of insanity is practically as rich as the possibilities of the human mind. We will briefly refresh our memories by defining a few of the most constant mental aberrations. Practically no case of mental deficiency but shows some one of the following symptoms:

Illusions.—An illusion is a false impression of a real perception, a wrong interpretation of stimuli. A mind misinterpreting rain as human voices, or seeing in the figures of the wall paper living faces and forms, is suffering from illusions.

Hallucinations.—A perception without an object, a sensation without external stimulus, is an hallucination. Hearing of voices in silence, smelling of poison in wholesome food, are not infrequent hallucinations.

We recall poor Lady Macbeth, after the murder of Duncan, washing her hands night after night and crying,

"Out, damned spot! Out, I say! Who would have thought the old man to have had so much blood in him? . . . What! Will these hands ne'er be clean? Here's the smell of the blood still. All the perfumes of Arabia will not sweeten this little hand."

Practically any of the senses may be involved in illusions and hallucinations.

Delusions.—A delusion, however, is more purely intellectual; and may be defined as the belief in the truth of that which is not true. Such beliefs may indeed have a sensory basis; still they may be psychic "Simon pure," as when one believes himself a God, or fancies he has the power to convert the earth into gold and jewels.

Obessions.—An obession or imperative idea is a dominating delusion which irresistibly determines the patient's actions. It will be readily seen how a dominating belief in that which is not true may lead to disaster. Many impulsive acts ending in violence and murder are the results of such beliefs.

Course.—The alienist uses the terms "acute" and "chronic" somewhat differently than they are used in other branches of medicine, signifying the mode of onset quite as often as the length of the disease process. Arbitrarily speaking, a mental case is not termed chronic until it has existed one year. The average duration of acute mental cases is from three to six months. Certain forms, however, are chronic from the beginning, as paranoia and dementia praecox.

Termination.—Mental cases may terminate in perfect recovery. The prognosis

depends largely on the class of the disorder; the more acute the onset, the better the outlook. Acute mania and melancholia often run a satisfactory course. In quite a proportion of cases, however, there is recovery with defect. Not infrequently the physician considers himself fortunate when he succeeds in eliminating the disease process, even though certain mental deterioration has resulted from the mental storm. Too frequently, however, mental disorganization or dementia, practically mental death, is the termination which may be prognosticated months and years in advance. The periodic insanities and epileptic insanity are prone to end thus. The organic insanities or those showing gross pathologic lesions, as syphilitic insanity, usually terminate in death.

Examination.—The examination of insane patients employs diverse and comprehensive faculties. In taking the history, which must frequently be obtained from the relatives, heredity must be thoroughly searched. The question of syphilis, either hereditary or acquired, should be determined, if possible, beyond doubt. The part played by moral strain should be carefully investigated. The influence of alcohol, excesses, reverses, disappointments, all have an important bearing. Popular opinion has exaggerated the influence of masturbation in the production of insanity. Such a large percentage of the insane are guilty of excessive and often shameless self-abuse, that their action has given strength to such a belief. In truth, however, these perversions are far more often results of perverted mentality than causes of the insanity. It is easy to see how the half-born offspring of defective parents or the high-strung ill-balanced children of an orderless home, where self-control and personal resistance are untaught, would readily become victims of homosexual habits.

In the physical examination, in addition to the regular methods of investigation, the reflexes should be carefully gone over. The Argyll-Robertson pupil is always found in general paresis. The urine should also be examined for indican, and a series of twenty-four-hour specimens should be obtained to determine the elimination of urea. In case after case of acute disorders it will be found that the urea output is forty to fifty per cent. below the normal; and this without any albumen or microscopic evidences of kidney lesions. It does not take a far stretch of the imagination to foretell the probability of disaster in the face of such poor nitrogenous elimination.

As one of the earliest symptoms of mental disturbance is insomnia, the ability of the patient to sleep should be carefully ascertained in all cases of suspected or impending interruption of the normal mentality. In examining acute cases it is necessary to differentiate the transient toxic delusions from real acute mental diseases. Too often cases under examination present no physical signs. Not infrequently the patient himself is exercising all the powers of his intellect to convince the physician of what is, to him, his strongest belief that he is sane. Peculiarly, in such cases, maniacal outbreaks and eccentricities in conduct are not in evidence to make a diagnosis easy; and the physician must look, as it were, into the depths of the patient's mind to find that tangle of ideas which is to prove that a seemingly rational being is *non compis mentis*. It is only by eliciting evidences of illusions, hallucinations, and most particularly of delusions and imperative ideas, that the mental defect may be sighted. Patience, tact, discernment, penetration, the ability to scent and follow a trail ever so faint, are not infrequently the requisites essential to diagnosing the status of some intelligent, charming, even fascinating, mental cases—cases which not infrequently, beneath a more or less perfect exterior of consistency, are being guided by delusions which may mean suicide or homicide.

One of the most frequent errors indulged in by those not conversant with these patients is the belief that a good memory is not compatible with insanity. Truly in the dementias and the grosser forms of defects, memory is disorganized; but a perfect memory is not, in the least, incompatible with a murderous paranoia. We must remember in the higher forms of insanity, it is the judgment that is at fault, and in some cases the judgment itself may be normal upon all subjects save those associated with and related to the one insane idea.

Classification.—To all students of the mind adequate classification of the multiform phenomena which emanate from the disordered brain has been a problem. It is, as yet, unsolved, and will continue to be unsatisfactory, as are all classifications of diseases, until it is founded on a firm pathologic footing. Nevertheless, many of the classifications now in use are needlessly complex. Moreover, during the last decade clearer conceptions of these disorders have made simplification possible. The classification here given is probably quite different from what most of us were taught. It is based upon Kraepelin's work.

Insanity.

Of the Developed Brain.
Without Intellectual Defect.
The Manic Depressive Group.
Paranoia.

States of Excitement (formerly Mania).
States of Depression (formerly Melancholia).
Mixed states.
With Intellectual Defect.
Epileptic Insanity.
Hysterical Insanity.
Dementia Praecox.
Secondary Dementia.
Senile Dementia.
Of Arrested Cerebral Development.
Idiocy.
Imbecility.
Feeble-Mindedness.

Manic Depressive.—The most striking change noticeable in this readjustment of terms is the compressing of the numerous forms of mania and melancholia into one large group, manic depressive. The mental student today accepts the teaching that these two great antithetical mental states are not true disease entities, but symptomatic expressions, strangely inconsistent, yet still but expressions of the same underlying malady. Those of us who have been taught otherwise must remember how constantly even typical manias are preceded by hours, days or periods of depression. A parallel alteration often occurs in the melancholias; while many cases were termed alternating, circular, periodic or mixed insanity, which show repeated alterations from excitement to depression. We now consider both excitement and depression simply as modified reactions of the mind to the same irritant; so we will discuss mania, melancholia and circular insanity as divisions of the manic depressive group.

Mania.—Following a temporary depression, sudden emotional outbursts will usher in a period of intellectual and physical activity, often of such intensity and duration as to give strength to the ancient belief that the maniac's powers are supernatural. The exalted mood, the incessant flow of ideas, accompanied by and, accentuated with, endless motor agitation, present a characteristic picture. Mania may be transitory, acute, subacute, periodic, or, rarely, chronic. Seventy per cent. of the manias recover practically without mental defects; ten per cent. pass on to dementia; five per cent. die, usually with some intercurrent disorder.

Melancholia.—Melancholia is much the more frequent form for mental disturbance to assume. In short, mental depression, anxiety, apprehension, self-condemnation and despair are the rule in insanity. Associated with this is marked motor inhibition. Typical patients often remain motionless in characteristic attitudes for hours and even days at a time. Its onset may be acute or subacute. Exceptionally it may become chronic. Two females are thus affected to one male. The acute and subacute forms are the most hopeful of all insanities as to recovery, ninety per cent. of them clearing up sooner or later. The chronic forms are prone to terminate in dementia. In all varieties of the manic depressive group, a gain of weight and reappearance of menstruation in the female usually announce the approach of convalescence. We might for a moment refer to the popular belief that the cessation of the menstrual flow is in many cases the cause of the insanity, it being claimed that in the absence of this function "the blood goes to the head." Of course the general physiologic depression accounts for the interruption.

Circular Form.—Before 1890 this term was rarely used and now it has been merged with the manic depressive group; still it is useful to differentiate that class of cases in which there is a distinct alteration in the expression of the psychosis. In its typical course the patient descends from the normal into the pit of mental despair, where he remains tortured and miserable for some weeks. Rather abruptly he will ascend to the blissful heights of maniacal paradise; and there, self-sufficient and exalted, abide for several weeks. From this phase he may return to the normal and there remain for a short time, or descend at once again to the depths of his miserable melancholia; and so alternating from depression to exaltation the disorder runs its course. Women are four times as prone to this disturbance as men. The prognosis of circular insanity is poor. After running a long course it tends to dementia.

Paranoia.—Paranoia, chronic delusional insanity, formerly spoken of as monomania, occupies a clear position as a form of mental aberration.

Definition—It may be defined as a psychosis, progressive in its course, characterized by a stage of depressed introspection, merging into a stage of systematized delusions of persecution, which after months or years may be followed by a later stage of elaborately systematized delusions of grandeur. The cranks of the world are paranoiacs, often rudimentary and harmless; still the fact that a man is under the sway of reasonless ideas puts him in this class. Such are those who spend their days trying to invent the machine which will run by perpetual motion. Many harmless paranoiacs feel that they have been called upon to save the world from sin, and are met on the streets exhorting, in and out of season. Harmless though this class may be, equally dangerous are some so-called cranks; and many of the crimes done in the name of socialism and anarchy have been the self-assumed acts of those under the sway of

paranoiac delusions. It is the paranoiac that perplexes and not infrequently baffles the physician and outwits the judge and jury. It is the paranoiac who is as reasonable as you or I on all subjects but those around which his delusions cluster. The paranoiac is frequently bright intellectually, with splendid memory, of excellent address, not depressed, responsive, entertaining—the dagger is hidden, and oftimes concealed with all the cunning of the paranoiac's mind, whose most intense intellectual efforts are given to his systematized false judgments. When called upon to examine a questionable case, it behooves the physician to pack up his credulity and sympathy, whet his wits; and then, with all the adroitness and keenness he can command, penetrate beneath the surface appearances, reach the very fountain of the patient's mental activities and affections, which may prove but a darksome pool of suspicion and error. Questions which are the most fruitful in eliciting some expression of the presedce of delusions of persecution (for it is usually in this stage the diagnosis is made) are those which bring out the relations between the patient and those most closely bound to him by ties of blood, affection or business. No intelligent mental case is properly examined until he has been encouraged to express his enmities, his fears, and his reasons therefor. Encouraged by the assurance that he will not be overheard and that the conversation is confidential, it is usually not difficult to obtain from the paranoiac, even in the earlier stages, expressions which will show his belief that he is the object of some form of persecution.

Heredity.—Heredity is practically constant in paranoia. The course is slow, each stage frequently covering several years. The prognosis is unfavorable as to the mind, yet life is seldom affected.

Epileptic Insanity.—Epileptic insanity is a disorder of the developed brain accompanied with intellectual defects. It is well to remember that ten per cent. of all epileptics become insane. There are moral reasons in addition to the physical damage which tend to bring about this high percentage. In the very nature of his epilepsy, the sufferer is bound to be more or less shunned and is circumscribed as to occupation, associates and pleasures; while the very treatment usually administered in the hope of curing his convulsions is in itself depressing and disorganizing to the higher senses. Epileptic insanity may assume the maniacal, depressed or mixed form, and is usually progressive in its character, terminating in dementia. There are very acute forms of epileptic insanity, the disturbance occurring sometimes in place of the usual convulsive attack. This form, however, is but short, and does not necessarily recur or become chronic. The peculiar liability of the epileptic insane patient to become maniacal, demon possessed, and commit, in insane, unreasoning fury, the most frightful impulsive acts and deeds of violence, should never be lost sight of. In the grasp of such a frenzy of convulsive rage, these patients are incapable for the time of being controlled by any influence but force. The physician's duty is unquestioned in committing the epileptic insane to the State hospitals, for their liberty is too frequently a serious menace.

Hysteric Insanity.—Hysteria occupies that uncertain boundary between sanity and insanity; and, considering the large number of the various forms of hysterical patients, it is surprising that insanity does not more frequently develop on the hysteric basis. Hysteric insanity is characterized by its strong emotional element—emotions, overactive, unruled, and entering into and coloring whatever phase the insanity may assume. Trances and catalepsy frequently accompany this disturbance. The hereditary element is strong; the prognosis for the attack good; but the outlook for the future outcome is not favorable. There is unquestionably a hazy line between hysteria proper and hysterical insanity in which the diagnosis becomes for a certain case arbitrary and falls into one category or the other, according to the diagnostician's predilections.

Dementia.—As logical as the "wages of sin is death" is the tendency of unchecked mental disease to result in dementia. The general enfeeblement of a mind, once normal, that hopeless mental condition, often associated with a body robust, though frequently lacking in the instincts of the lower animals, existing merely as a parasite, the dement abides to remind us of the stigmata of our modern life, to emphasize the old truth that the "sins of the father are visited upon the children"; and to tell us how much is yet to be done before we have mastered our art of "ministering unto minds diseased." Dementia is classified as primary, secondary, senile and paralytic. Again, within the last few years, several disorders have been compressed into a disease entity; and now the term dementia praecox or precocious dementia is used to comprehend adolescent insanity, ovarian insanity, katatonia and stuporous melancholia. Probably twenty-five per cent. of all State hospital admissions now belong to this group; and these are the unfortunates who have been unable to stand the strain to which their mental life has been subjected. They are the ones whose mental

stability falls below that standard which our unnatural educational ideals demand. The onset of dementia praecox is insidious, and frequently cases are treated for neurasthenia during those valuable months in which interruption of the disease would produce satisfactory results. The disorder assumes various forms in different individuals, chief among which are changes in the affections and alternating periods of excitement, depression and confusion, with apparently normal intervals. Delusions not infrequently develop with marked peculiarities, dilapidation of thought and profound damage to judgment. Memory may be good, but the patient seems incapable of adjusting himself to new surroundings, and very often develops that peculiar condition termed negativism, in which his chief energies are spent in opposition or resistance. Rapidly or slowly, but too often surely, this mind drifts on, to finally break, a wreck on the rocks of dementia. The present opinion inclines to the belief that dementia praecox represents the irritant influence of the results of chronic defective tissue metabolism upon a brain of imperfect pedigree. Insomuch as this is true, rational treatment of dementia praecox instituted early in the disorder will alone be productive of satisfactory results.

Secondary Dementia.—The alienist judges his success in the treatment of acute mental disorders by the proportion that recover without defect; or, if defect exists, by how small a margin that mind is affected by dementia; so the secondary dementias, or those which follow the other insanities mark unsuccessful or inadequate treatment. It is unquestioned if every acute mental patient could have promptly instituted that regimen which leaves nothing undone for his welfare, the number of miserable, hopeless secondary dements would be greatly reduced. When we consider that two-thirds of the insane in the public institutions are dements, we can but realize how many cases, unfortunately, have not been able to obtain that special care upon which the integrity of mental life depends.

Senile Dementia.—Arteriosclerosis, as it affects the brain, produces those changes commonly called softening; and this results in more or less rapid deterioration termed senile dementia. A striking characteristic of this disorder is the melancholia. Some of the modern writers are now restricting the term melancholia to senile dementia.

Paralytic Dementia.—One of the very few pathologic comforts which are granted the alienist is found in this disorder which shows definite anatomical changes adequate to account for the accompanying mental disturbances.

General Paralysis of the Insane.—General paresis and tabes of the brain are terms frequently used for paralytic dementia. This is a progressive disorder accompanied by marked weakening of the mind and general physical paralysis. Twelve males are affected to one female. It has been stated that syphilis is the known cause of ninety-five per cent. of all cases, and the unknown cause of the balance. While this is probably a little stretched, still syphilis is unquestionably a very constant etiologic factor. The prodromal stage is often unsuspected. It is not until a man, perhaps of high standing in the community, has been so altered by this disease as to be made conspicuous by his peculiarities that the disorder is suspected. After the malady is established the diagnosis is comparatively simple. The Argyll-Robertson pupil (responding to accommodation but not to light), decided modification in the tendon reflexes (they are always diminished or exaggerated, never normal), a jerky tremor of the muscles of the mouth at the beginning of voluntary movement, and not infrequently peculiarity in speech, combined with evidences of delusions usually exaggerated in nature, and more or less marked evidences of loss of moral feeling, constitute a picture not to be mistaken. It is the victim of general paralysis, who, after having lived an exemplary life, shocks the community by some atrocious act, not infrequently sexual in nature; or disgraces his family by turning from the paths of rectitude and giving himself up to licentiousness or drunkenness. The progress of these cases is comparatively rapid. The period of exaggerated delusions in a few months gives way to dementia, the general paralysis increasing. Intercurrent disease usually blots out this miserably ended life within three or five years after the onset of the disorder.

Insanities with Arrested Cerebral Development.—It is only necessary to mention in their order the different classes of congenital mental defects:

Idiocy is a term used to describe that lowest mental type of living human beings who are incapable of intelligent expression and unable to in any manner care for their own personal needs.

Imbecility includes a higher type, those unfortunates whose capacity for expression is very limited, yet who are capable of some care of their person.

The term feeble-minded is reserved for a still higher group, including those usually said to be "backward." Many feeble-minded individuals lead fairly useful lives, employing their "one talent" to better ad-

vantage oftimes than their brother who has the "ten!".

Treatment.—One of the most satisfactory advances in medicine during the last few years has been the progress made in the treatment of mental diseases. To the family physician, into whose hands these cases practically always fall first, devolves a grave responsibility. As a rule, the family has no idea of what is best to do, or is influenced by some prejudice which must be met and overcome by the physician. What is to be done with these unfortunates depends upon two factors: the type of the disorder and the financial ability of the patient. Certain types of insane, rich or poor, should be committed to the State hospitals for the insane. Were this rule never violated, numerous homicides and suicides would be prevented. Such are cases of epileptic insanity, many cases of paralytic dementia, all homicidal paranoiacs, and the severer types and maniacal forms of the manic depressives. Where the cost of special care will be a burden which cannot or should not be borne by the family, the State hospital is the proper place for the large percentage of all acute cases. Taking the insane as a class, it is practically an axiom that they should be removed from home. A certain discipline, kind and firm, yet unequivocal, is essential. There is a peculiar tendency in many forms of insanity for the patient to resist the authority of those near to him and to resent their efforts for his good, while he will accept and often co-operate with the efforts of strangers. Not only the good of the patient but the welfare of the home demands this separation. In rare cases, it is practicable to isolate the patient in his own home by reserving a certain portion of the house to him and his nurses. When the patient's means justify the step, efficient treatment is given in many of the specially equipped private hospitals, where each case may have special nursing and individual study, and where association with other mental cases is limited.

Prophylaxis.—Prophylaxis is the only cure for insanity. Any child of neuropathic parentage, forced through an elaborate intellectual training instead of receiving a simple mental education, while his muscles are well trained and his life directed into practical work-a-day channels, is being impelled along the path which may lead to mental chaos or death.

Acute Cases.—In all acute cases, of whatever class, isolation from the family and rest are the prime essentials. Nurses or attendants who have had training in the care of the insane are particularly valuable in handling these troublesome patients. The prolonged neutral bath or hot pack should be the routine treatment for insomnia. This is the only safe hypnotic. Duboisin sulphate, hypodermically, .01 grain is more helpful than morphine when drugs are used to produce sleep. Equally good are thirty-minim doses of paraldehyde, while veronal or equal parts of trional and sulphonal are useful but less to be depended upon. The hot-pack with the ice-cap to the head, alternating with the prolonged neutral bath is the rational treatment for the states of excitement. In rare cases it is necessary to supplement the hydrotherapy with one of the sedatives above mentioned. Hydrotherapy may be resorted to with equal confidence in the stages of depression. Alternating applications of heat and cold prove beneficially stimulating. In all cases elimination by the use of mercurial and salines, supplemented by daily or every other day copious colonic flushings of normal saline solution, constitute rational treatment. In many cases mental depression responds to a hypodermic of codein or regular doses of deodorized tincture of opium. The sulphocarbolates, salicylates and other intestinal antiseptics may well be pushed to the physiological limit. The greater the excitement or the depression, the more urgent is the need for food which should be administered every two hours, raw eggs, milk and broths being our chief dependence. If ample nourishment cannot be persuaded into the patient with tact, recourse should be taken to the nasal tube. Complete rest in bed, of course, demands daily massage to overcome the tendency to muscle atrophy. All acute mental cases should be encouraged to drink water freely. As opium is useful in relieving the mental pain of melancholia, so are duboisin and scopolamin in moderate doses, for the motor restlessness of mania. Of course it is unnecessary to mention that in all acute cases, sharp-pointed scissors, knives and other implements capable of inflicting damage, should be kept from the patient.

Moral Treatment.—In our relations with insane patients we must not deny them the same personal interest which we grant our rational patients. Kindness and patience cannot be lost on the most refractory; still kindness and patience without firmness are useless. In no department of medicine is absolute truthfulness more essential. Nothing weakens the physician's hold and lasting influence for good on his patient more surely than deception. To bring such a patient to an institution for treatment under the promise of taking him to a hotel is to antagonize his sense of justice and to arouse his opposition to much of what is to be done for him. It is better to force a patient to a

hospital than to deceive him. It is weakening to agree with a patient's delusions. While the majority of them cannot be argued out of their misbeliefs, still firm, kind insistence without undue reiteration that such ideas are mistaken or are unreasonable, can but weaken the patient's confidence in his delusions; while agreeing with him hopelessly confirms and strengthens him in his mental perversions. For subacute cases, convalescents, mild dementias and paranoiacs the occupation treatment is the ideal. Something to do every waking hour; that something to be done well and on time, with the reward of amusement for good work, is the treatment of the fortunate few today and will be in the near future the accepted method of managing this large class. Our State hospitals are providing untold benefits for the defective class in furnishing means for colony treatment, as the above described management is termed in the larger institutions. The out-of-door life, given up to simple industry under competent surveillance is the ideal treatment for these patients.

And when success does attend our efforts nothing can be more satisfactory than to see contentment displace worry, interest obliterate apathy, confidence overpersuade suspicion, certainty heal doubt, intelligence dispel the dark mists of error and sanity rise triumphant from the chaos of mental disorder.

Diabetes Mellitus.†

By J. A. Reagan, A. M., M. D., Weaverville, N. C.

I have chosen this subject because no member, so far as I know, has written upon it; and also that we may discuss it, if perchance some valuable suggestions may be made that will give us some clearer light on its etiology and treatment.

As to the cause of diabetes mellitus there have been, and still are, different opinions entertained by the most eminent of our noble profession. It cause has, by some, been attributed to the liver, while others, equally eminent, contend that this theory is not correct, as the liver has been examined after death and found healthy, and not containing an abnormal quantity of glucose. Others have attributed it to the pancreas, and said the functions were over active, which caused too great a flow of pancreatic juice that changed the starchy matter into glucose. Latham and others take a different view, and think that neither the liver or pancreas is the cause, but that the muscles are the cause or source of the sugar in the blood. Again it is said that the nerves is the origin of the disease. This is held and advocated by many of the first men of the profession. But whatever may be the cause we must bear in mind the fact that the glucose in the blood acts as an irritant poison that invades every tissue of the body, which predisposes to inflammation, especially of lungs and kidneys. We may not agree as to the cause of the disease or the organs at fault, yet we all know there are exciting causes, which some attribute to an excessive use of sweets, starchy food, beer, cider, or champagne. Some medicines are accused of exciting the increase of sugar in the system, such as opium, chloroform, and the bromides of potassium. Some persons from their idiosyncracies are more liable to the disease than others. It is not the overworked physical laborer of the hard working class who is more liable to an attack than other laborers, but the mental strain and anxiety of the professional class, hence some have concluded that the physician is more liable to an attack of diabetes melittus than any other class.

The amount of water passed in twenty-four hours is sometimes enormous. Dr. Thomas Watson, in his lectures on the practice of medicine, says, "Cases are recorded by writers of credit and veracity in which seventy pints were passed daily, nay, one Italian author declares that two hundred pints have been discharged in that time." It is not the amount of water alone that constitutes the disease, but the honey, as the litteral translation of the Greek word means, which is in the water, and system. The amount of sugar is also very large in some cases, running up to one-sixth, or even one-eighth per cent. The great effort of the profession seems to have been to lessen the amount of sugar instead of removing the cause, and in order to accomplish this they have recommended strictly the use of proteid diet. The error of this practice has been shown by several investigators. Dr. E. L. Munson says the sugar decreased for six or seven days, and then increased regularly nearly up to where it was when he began the proteid, or meat diet. All the time the proteid diet was exclusively used the patient lost flesh, and became quite weak. He found also that this diet produced dyspepsia and neuralgia and vertigo—his mind wandered considerably. He finally became depressed and delirious, and lost his appetite. He then placed him on a mixed diet, and says "One month after employing a mixed diet the patient finds himself subjectively better every day. He has gained in weight and muscular power, and the previously marked cerebral symptoms have almost entirely disappeared. Headaches and vertigo, which were form-

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erly almost constant under the proteid have nearly disappeared." After thoroughly investigating the effect of the dieting system Dr. Munson says, "In regard to diet, as has been shown a strictly proteid diet, instead of removing may even increase the dyscrasia in a true diabetes, nor in advanced cases will it be efficacious in its only object, the disappearance of sugar from the urine. As the effects of a rigid proteid diet have been detailed it will only be necessary in this connection to state that a purely proteid diet should under no circumstances be employed. Food of all varieties, provided they are nutritious and wholesome, should be allowed, although, of course, no excess in eating should be permitted. Moderate amounts of carbohydrates in the form of bread, oat meal, or rice should by all means be encouraged." He also recommends exercise and cheerful society.

Dr. H. Forestier, physician at six-les-Bains says the "Point I wish more particularly to impress is the diet used, and the reduction following while using the mixed diet." Prof. Finkler used kneeding in 14 cases, and says, "The diet at the same time was mixed. The result on the whole was favorable, the sugar decreasing and the bodily weight increasing." Some physicians travel on the old track, and fear to introduce any treatment that would be criticized by others. So far as I am concerned I have believed for years that diabetes mellitus carried patients off fast enough without starving them, to make them die sooner. Consequently what few patients I have had with this disease I gave a mixed diet, and found they improved faster than they had done under others who used the proteid diet. It is known to the medical profession that no one diet will sustain the whole system—milk comes nearer than any one diet. Those physicians who believe so strong in the starvation treatment must feel that Dr. Munson's experience ought to have kept the sugar decreasing, instead of increasing as it did, and that it should have increased instead of decreased under a mixed diet. Even in health a man is not able to keep up the equilibrium of his metabolism on purely a meat diet. He could not live many years by so doing; it is much worse in sickness when a wasting disease is helping to carry him off.

In beef the proportion of nitrogenous to the non-nitrogenous food is as one to seven-tenths—consequently meat would have to be increased to such an amount that he could not digest it, consequently all the evils arising from indigestion would follow. Remove all carbohydrates from the food, the appetite may increase, but the muscles will decrease. Man can not live by meat alone, he must have some carbohydrates mixed with it. Professor Oppolzer says, "The diet can exert no direct influence upon the disease itself; it is only able to prolong life." While many physicians cling to the meat diet, and push it until the patient dies, the question naturally arises: is it best to starve part of the system in order to give another part rest, without a hope of curing the patient. Mr. Gregory obtained, by means of an emetic, the digested food from the stomachs of two men who had dined two or three hours before. One man was healthy, the other had diabetes. In each the food had been the ordinary food of the hotel. Applying the ordinary test, ziost, he found the vomited matter of each fermented. Dr. Thomas Watson, in his lecture on Diabetes Mellitus, after describing the spmptoms, experiments, tests, and treatment, says, "I dare not affirm that diabetes, although it seems merely a functional disorder, has ever been cured." Yet many other writers have reported a number of cured cases. Tuberculosis was once regarded as incurable, and now the best writers put the recoveries at thirty-three per cent. I saw in the dissecting room of a college of repute a lady who had had consumption some twenty years before her death, which was caused by a severe case of typhoid fever. One of the professors had treated her, and permission was given to examine her lungs. Her lungs were sound and showed the cicatrices where they had healed. So we hope the profession may be able, at no distant day, to find a remedy for diabetes mellitus that will regulate the system, and bring about a natural action of the different organs inuolved, especially, in my opinion, the nervous system should be closely watched, as it plays an important part in the production of the disease. While a proper diet is commendable, yet the proper diet, in my opinion, is a mixed diet—not proteid alone. It is remarkable the number of medicines that have been tried and recommended in this disease, and many of the mof entirely different therapeutic action. Opium, arsenic, and several acids have been recommended by different writers. Dr. John Day recommends peroxide of hydrogen on the principle that the sugar has a heating power—a tendency to burn up vitals by degrees, creating great thirst. Guyst-Dauncy recommends citrate of soda, and professes to have cured several cases by that treatment. Professor Bouchardt says "dieting patients is only palliative," but recommends exercise—even forced exercise—in any way in open air. He says he has had good success with this treatment. Van-Holst recommends glycerine and claims success in its use. Dr. McCharteris reports

success in the treatment of diabetes mellitus by the use of pilocarpin. Dr. George W. Balfour says he has succeeded in curing several cases by the internal use of lactic acid. Dr. Richter recommends emetics, and says several cases have been cured by that means. He gives a case of diabetes mellitus where an emetic brought up a very great quantity of bilious matter, and says, "I can assert with truth that the next morning there was not a vestige of diabetes, or any other complaint present."

When we read the opinions and recommendations of the most prominent physicians of years that have long gone by, and then study the opinions and treatment of the present, we are still at sea, and the age and learning of the present demand that we should more thoroughly and scientifically investigate its etiology—the effect on the different parts of the system, and be able scientifically to treat the disease and not be drifting danger on the vast ocean of doubt and uncertainty. Dr. Munson certainly deserves praise for his labors in that direction—let others take it up where he has left it, and work out the cause, effect, and proper treatment.

I have had but few cases myself—my treatment has been to regulate the system, and try to keep it in order—watching carefully the bowels, stomach, liver, nervous system, and the kidneys. I allow a mixed diet, milk mostly, with bread and meats, and use belladonna and nux vomica internally. I prefer this to opium or any other medicine to stop the flow of urine. But from long experience, and tolerable close reading I find that the greater the different kind of medicines recommended and used in any disease the less reliance is to be placed in any one of them. It shows a want of confidence in the treatment of any disease when the profession recommends so many kinds of medicine in the treatment of the disease.

Abdominal Pregnancy.—John Egerton Cannaday, M. D., Hansford, W. Va., (New York Medical Journal) after discussing the history of the lesion so far as the surgical knowledge of it is concerned states that only during the last fifty years has its treatment been worthy of consideration. Lawson Tait has been the pathfinder in this as in some other subjects. The statistics of frequency vary widely according to the counts of different observers. About 8 per cent. of all cases of extra uterine pregnancy are said to be abdominal in character.

The symptoms are divided into those common to all varieties, and those peculiar to individual varieties. Of the first class are the reflex symptoms which belong to all normal pregnancies. The nausea and vomiting are commonly severe and begin usually early in pregnancy. Two symptoms specifically point to extra uterine gestation. They are the bloody discharge, and the abdominal pains, which are as a rule colicky and sharp; they start from the region of the tumor and radiate downwards and outwards. These pains may begin about the first of the second month and last throughout pregnancy. The acme of their severity is about each menstrual period, and there may be intermission or entire freedom from them between the periods. During these attacks of pain the abdomen may be swollen and tender to the touch. The pulse is accellerated, but there is no temperature rise. The bloody discharge from the uterus occurs in a majority of patients. This phenomenon is usually accompanied by pain and the expulsion of the decidual membrane, the discharge being due to rupture of the decidua, of a seropurulent, coffee colored or reddish nature, and may be apparently so profuse as to call for the tamponade. In the primary abdominal type there may be no disturbance of the menstrual function. The return of the menses is indicative of foetal death. The rectum may be irritable, and pulsation can often be elicited by vaginal palpation. The most typical symptom is metrorrhagia coincident with the symptoms of pregnancy in its early stages. If associated with this is a discharge of decidual tissue one should expect extra-uterine gestation.

False labor may be premature, happening at the seventh or eighth month, but usually makes its appearance at term, rarely afterwards. At the same time the patient has intermittent pains analogous to true labor pains. The cervix does not become obliterated but dilates sufficiently for the entrance of one or two fingers. After the decidua is expelled the pain ceases and does not return unless there has been a rupture of the foetal sac. The signs of labor will disappear, and milk will come into the breasts.

The symptoms of rupture are sudden and severe, pain radiating over the abdomen, rapid weak pulse, air hunger, shock and other concomitants of haemorrhage. There is apt to be nausea, hiccough and extreme tenderness of the abdominal walls. The escape of the foetus from the tube without much loss of blood is marked by severe pain, referable usually to the side, tenderness of the abdomen, and often a temperature rise. The rupture may be spontaneous or provoked by some slight trauma.

Physical Diagnosis.—The os and cervix are often soft, and either firmly confined by adhesions or pushed entirely out of their

natural position by the rapidly enlarging cyst. Foetal pulsation may be felt through the vaginal wall, and the foetus can at times be outlined in the same way. There are two tumors, one of which is usually situated to the right or left of the median line. A sulcus between the adventitious body and the cervix can be made out. In some cases the foetus is palpable through the abdominal wall. On manual examination of a cyst containing a dead foetus of considerable size crepitation of the bones may be obtained. The uterus remains stationary in size after the fourth month. Foetal heart sounds and movements are discernible after the fifth month.

Diagnosis.—The diagnosis is nearly always difficult and cannot be made with certainty during the first period. At that time diagnosis of probability constitutes an ample reason for surgical interference. It may be taken for ovarian cysts, fibroid tumors, several forms of salpingitis and haemtocele. It may possibly be differentiated from these by the history, the malposition of the uterus, and the disturbances of pregnancy. In the second period of pregnancy diagnosis is not so difficult, but it is nearly always impossible to distinguish one variety from another. In making a diagnosis we have what we can elicit from the story of the patient in her own words, her replies to minute questionings, and a physical examination. After the escape of the foetus from the tube and the beginning of the secondary abdominal tube, the acute symptoms may subside, but there are apt to be recurrent attacks of pain. An apparently normal condition necessarily tends to throw the physician and patient off their guard. The diagnosis is naturally difficult, because of the irregularity of the symptoms, the frequency with which it is simulated by other conditions, and the ease with which the bleeding with or without expulsion of the decidua may be taken for an ordinary abortion. Probably there are few conditions more plain to the careful observer than a typical case of exfoetation, but comparatively few cases are typical. The diagnosis of abdominal pregnancy is rather rarely made prior to false labor, for the reason that the physician's attention is seldom called to the case. We should regard sudden collapse associated with pallor and other symptoms of intra-abdominal haemorrhage in any woman having a possibility of pregnancy as prima facia evidence of a ruptured ectopic gestation sac. A period of amenorrhoea usually precedes the bloody discharge which does not correspond in nature nor necessarily in point of time with the natural monthly bleeding. Important points relative to the bleeding are the color, the persistence, and the presence of membrane or pieces of membrane. Among the most characteristic symptoms are the variable periods of amenorrhoea, irregular uterine haemorrhage, pelvic pain, and discomfort, and the shedding of the uterine decidua. This pregnancy is like a mine ready to explode without a moment's notice, and it is highly important that the patient be in easy reach of competent surgical skill at all times. It is nearly always best to approach these pregnancies by a median laparotomy. Complete removal of foetus, membranes, and placenta is highly desirable. By reason of dense adhesions, great danger of haemorrhage or dangerous condition of the patient this procedure will at times be impossible. Under such circumstances the edges of the opening in the sac should be sutured to the parietal peritoneum and the sac carefully drained. The placenta in such cases will come away gradually by fragments, and in two or three weeks its exfoliation will have been complete. Surgical intervention should take place as early as possible after the death of foetus. If the cyst in such case is in the cul-de-sac vaginal section is appropriate; after the extraction of foetus and placenta the cavity had best be packed with a five per cent. iodoform gauze. I wish to urgently emphasize the absolute necessity for removal as early as a diagnosis can be made, and the stringent indication for immediate operation when we see a pregnant woman showing symptoms of intra-abdominal haemorrhage.

The author reports a case in which the diagnosis was made prior to rupture, but operation was not resorted to until a short time after rupture had taken place. Although the placental implantation was very extensive a complete operation was performed. Although the patient was in a very bad condition from haemorrhage and shock under prompt stimulation she reacted and made an excellent recovery, the wound uniting by primary intention without drainage.

The writer summarizes his paper as follows: The greater frequency of ectopic pregnancy than the number of observed cases would lead us to believe: The usual irrelevant and atypical nature of the symptoms; the difficulties in the way of making a diagnosis and the necessity for a careful study of the cases, in which the condition might be suspected, both in its present and past aspects; the importance of studying the character of the uterine discharges; the association of this with pelvic pain and discomfort, and the signs of pregnancy; the advantages of prompt operation, removal of blood and other debris by dry sponging without irrigation, thorough haemostasis

and the closure of the wound without drainage.

Technique of Intramuscular Injections.—Borman (Roussky Vratch) emphasizes the need of a thorough study of the technique of intramuscular injections, especially of insoluble mercury compounds, such as the salicylate which is injected in a ten per cent. emulsion in petrolatum. Opinions differ as to whether mercury in this form is absorbed, and it is important to secure the best conditions for absorption. One point in making the injections is to avoid injuring the sciatic nerve. A line should be drawn two fingers' breadth outward from the superior posterior spine, and is drawn vertically to the gluteal fold. An area of three cm. to either side of this line denotes the limits within which injections may affect the sciatic nerve. Embolism is the most dangerous complication of the method, and is accompanied by sudden pain in the chest, weakness, and a suffocating cough. The choice of the site for the injections has much to do with the frequency of embolism. The site preferred by the author practically corresponds to Gross's triangle. The latter is thus defined: The upper limit is the middle of a line drawn from the posterior superior spine and the great trochanter; the distance from the median line is defined by taking the outer third of the region of the buttock or the middle of a line drawn from the ischial tuberosity and the great trochanter. Around this point a circle about two fingers' breadth in diameter is drawn and the punctures are made exclusively within this circle. The length of the needle should be from four to six or even seven cm. Before the author used this area exclusively he obtained one case of embolism to each 150 injections; a considerable amount of induration also resulted. By the new method, however, he never had a case of embolism, although he employed it over a thousand times.

Melanotic Sarcomata.—Handley, in the London Lancet, has made a very careful study of a case of melanotic sarcoma occurring in a woman, aged thirty-four years, and concludes that in the earlier stages the processes of dissemination are essentially identical in carcinoma and in melanotic sarcoma. Dissemination is initiated by the access of malignant cells to the fine lymphatics, followed by the centrifugal spread of permeation along the main lymphatic plexus into which the primary growth pours its lymph, and by secondary permeation of small tributaries of this plexus. Embolic invasion of the regional lymphatic glands occurs, and around this fresh focus permeation recommences. Meanwhile, almost invariably in melanotic sarcoma, and sometimes in carcinoma, invasion of the blood stream takes place, either by local infiltration of veins from constant permeated lymphatics, or by malignant cells carried into the blood along the thoracic duct from invaded lymphatic glands. When this stage is reached dissemination in melanotic sarcoma and in carcinoma, respectively, develops along divergent lines. In carcinoma lymphatic permeation, aided by the escape of cancer cells into the serous cavities, usually remains until the end the main agent in producing secondary growths, a fact which appears to depend upon the almost invariable destruction of such epithelial cells as obtain access to the blood stream. The same mode of dissemination may sometimes occur in melanotic sarcoma, but as a rule the mesoblastic cells of melanotic sarcoma are able to thrive when lodged in a blood vessel. Thus in the later stages of melanotic sarcoma the slow process of lymphatic permeation usually recedes into insignificance, and the patient dies with almost universal deposits, resulting from blood embolism, an event which only as a rare exception occurs in carcinoma.

Armour & Company are offering Lecithol, an emulsion of lecithin, the most important phosphorus-bearing compound in brain and nerve tissue. Lecithol has an agreeable taste and odor, and each drachm contains one grain of pure lecithin.

Lecithol is indicated in all cases of nervous diseases, in tuberculosis, anemia, rachitis, and wherever phosphorus or the glycero-phosphates are required.

The administration of Lecithol causes a retention of nitrogen, a disease in the excretion of sulphates, and assists in the assimilation of protein.

At the recent meeting of the American Medical Association at Atlantic City, June 4-7, the following officers were elected:

President, Dr. Herbert L. Burrell, Boston.

Vice-Presidents, Dr. Edwin Walker, Evansville, Ind.; the Honorable Hiram R. Button, M. C., Delaware; Dr. George W. Crile, Cleveland, O.; Dr. W. Blair Stewart, Atlantic City, N. J.

Secretary, Dr. George H. Simmons, Chicago, Ill.

Treasurer, Dr. Frank Billings, Chicago, Ill.

Trustees, Dr. T. J. Happel, of Trenton, Tenn.; Dr. W. W. Grant, of Denver, Col.; Dr. Philip Marvel, of Atlantic City, N. J.

The meeting place for the next annual session is Chicago.

Charlotte Medical Journal

EDWARD C. REGISTER, M. D., Editor.

No. 36 South Tryon Street, - - - -

- - - - - - - - - - Charlotte, N. C.

THE FIFTY-FOURTH ANNUAL MEETING OF THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

The fifty-fourth annual meeting of the Medical Society of the State of North Carolina was held at Morehead City, N. C., June 11, 12 and 13.

The registered attendance, while not up to that of the Charlotte meeting of 1906, which registered more than four hundred members in attendance, was about two hundred, which far exceeded that of any previous meeting of the Society when held at an extreme point of the State. While it is noteworthy that there are a large number of the active members of the State Society who will go to the farther ends of the State to attend the annual sessions, yet the practical fact is that the sparsely attended sessions have always been those held at extreme points, while the largely attended ones have been those at central points like Raleigh, Greensboro and Charlotte. Bearing this in mind, all present pronounce the Morehead meeting a decided success from the viewpoint of attendance.

The program was a varied one, and contained a creditable number of papers, but the many attractions incident to a meeting at a popular seaside resort at this season of the year caused a considerable number of the essayists to be absent when their papers were called. The volume of transactions will show a number of excellent papers presented, and with discussions possibly not quite up to the standard of the Society's best.

The reports of the officers exhibited the financial affairs of the Society as being in good condition. A few of the county Societies had failed to complete their returns for the year. The Society by unanimous vote commended the efforts of the Secretary, Dr. Stanton, in his work with the county Societies and they were urged to respond with greater promptness to all calls made for reports and dues. Dr. Stanton has done good work for the Society, and we predict greater results from his labors the coming year.

The Presidential Address by Dr. S. D. Booth was replete with valuable matter relative to that dread disease upon which so much of professional interest is now centered—tuberculosis. It was referred to a special committee and ordered published.

The following officers were elected for the ensuing year:

President, Dr. J. Howell Way, Waynesville.

First Vice-President, Dr. J. E. Stokes, Salisbury.

Second Vice-President, Dr. J. A. Turner, High Point.

Third Vice-President, Dr. W. H. Dixon, Edwards.

Orator, Dr. Chas. Mangum, Chapel Hill.

Essayist, Dr. Thos. R. Little, Greensboro.

Leader of Debate, Dr. S. E. Koonce, Wilmington.

Winston-Salem was selected as the place for meeting in 1908, the date of meeting to be fixed by the President and Secretary.

ECHOES OF THE MOREHEAD MEETING.

While the registered attendance of members at the meeting was good, it was evident the attendance in the places of meeting would have been better had the outside attractions been fewer and less enticing.

The House of Delegates did its work promptly and in less time than in former years—a point to be commended, for while the business of the Society must be attended to, it should never be lost sight of that the chief concern of our annual sessions should be the mental improvement which follows the hearing of good carefully prepared papers and intelligent discussions thereon.

The unanimous vote given in the session of the Committee on Nominations for Dr. J. Howell Way, of Waynesville, for the next President of the Society was a fine demonstration of the deserved popularity of that gentleman as well as the general appreciation by all of his good work for the profession during the twenty years of his membership. The great satisfaction manifested on all sides when their choice was made known attested well that they had made no mistake in placing Dr. Way at the head of the profession next year.

The choice of the nominating committee for the various positions, as Vice-Presidents, Orator, Essayist, &c., were made with apparently great care and were such as to receive unqualified approval on all hands. Certainly in their report it was evident that the disposition to put forward our very best men was strongly in evidence.

The selection of Drs. D. T. Tayloe, of Washington, and James A. Burroughs, of Asheville, for members of the State Board of Health for the ensuing term was a wise one and gives great strength to the personnel of the Board. Constituted as it now is, it may well be questioned if the hopes of the Father of the Board of Health, the late lamented Dr. Thos. F. Wood, that the Board of Health should always have upon it the strongest and best men the Society

could elect, are not well nigh realized.

Much pleasing comment was heard upon three features of the Wednesday evening program: The Oration of Dr. L. B. McBrayer—pronounced one of the finest in the Society's history; the Annual Essay of Dr. E. T. Dickenson, replete with most valuable observations on the trend of the profession: the sketch of Dr. H. A. Royster on "The Life and Times of Edmund Strudwick, Surgeon" and the first President of the North Carolina Medical Society! As was pointed out by Drs. Way, Lewis and Hodges, who discussed Dr. R's essay, the study of the history of our great local men in North Carolina has been sadly neglected, and Dr. Royster was deserving of the vote of thanks moved by Dr. Way and passed unanimously by the General Meeting of the Society.

At the recent annual session of the State Board of Health for North Carolina held at Morehead City, June 11-13, the following were elected from the Board of Health as members of the North Carolina State Board of Undertakers and Embalmers:

Dr. E. C. Register, Charlotte; Dr. J. Howell Way, Waynesville; Dr. R. H. Lewis, Raleigh.

Dr. R. H. Lewis was unanimously re-elected Secretary of the Board of Health.

THE NINTH ANNUAL SESSION OF THE TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA.

The ninth regular annual session of the Tri-State Medical Association of the Carolinas and Virginia was held in the assembly hall of the Jamestown Exposition at Norfolk, Va., June 3rd and 4th, 1907.

The arrangements effected by the local committee under the wise leadership of Dr. Southgate Leigh for the comfort and pleasure of the members attending were complete and satisfactory in every detail, and on every hand words commendatory of the successful management of their part of the meeting were heard.

The attendance was small as compared with the record-breaking attendance at the South Carolina meeting of 1906. This, however, is readily enough accounted for by the unfortunate locating of the date of meeting not only in conflict with the A. M. A. session which was being held in Atlantic City the same week, but coming only three days subsequent to the Southern Railway Surgeons meeting in Washington, and the North Carolina Board of Medical Examiners meeting the same date in Morehead City with the State Society coming immediately afterward, conspired to produce a plethora of Medical Societies which made it practically impossible for gentlemen interested in all to attend. Despite this great drawback, the energy and enthusiasm of the President and Secretary surmounted apparently impassable obstacles, and with a zealous local committee, made the meeting a success.

The Executive Committee being fully impressed with the vital importance of having the meetings of the Tri-State held at a time when there would be no possible conflict with other Medical Societies meeting in the constituent States wisely decided that future sessions should be regularly held on the third Tuesday and Wednesday of February. We congratulate them upon this wise ruling, and bespeak for the Tri-State a continuance of the excellent work it has been accomplishing since its inception a decade past.

The Presidential Address of Dr. R. E. Hughes was unusually strong and forceful, and will prove both entertaining and instructive when read by those who were not fortunate enough to have heard it delivered. We congratulate Dr. Hughes on the address.

A number of good papers were presented and the discussions were pitched upon the high scale which as a rule has characterized its meetings.

The reception tendered the Association and visiting guests with their friends at the Virginia State Building on the Exposition grounds was one of the most beautiful of similar occasions the members of the Tri-State have experienced, and when the suitableness of the place coupled with the elaborate perfection of details shown in the every arrangement is remembered, it will be difficult to surpass or even attain to it in the future.

The following officers were elected for the ensuing year:

President, Dr. Stuart McGuire, Richmond, Va.; Vice-Presidents, Dr. Southgate Leigh, Norfolk, Va.; Dr. Edw'd. C. Register, Charlotte, N. C.; Dr. C. M. Rees, Charleston, S. C.; Secretary-Treasurer, Dr. J. Howell Way, Waynesville, N. C.

The annual session of 1908 will be held in Charlotte, N. C., beginning Tuesday, Feb. 18th. With the next coming on only about half a year from now we suggest to the officers and active members the advisability of soon entering upon the work of securing a full program that the Charlotte meeting may be as complete and successful in every way as the various State and interstate meetings held in this attractive city have usually been.

DR. ALBERT ANDERSON.

The Directors of the Jefferson Life Insurance Company recently organized at Raleigh, N. C., with a paid up capital stock of half a million dollars have done wisely, with many prominent medical men over the State

to select from, in selecting as Medical Director for the company Dr. Albert Anderson, of Wilson, N. C.

A gentleman of splendid physical endowment, *mens sana in corpore sano*, well versed in the theory of medicine and with the varied and developing experiences of a score of years of busy, active professional life, including a large and extensive general practice, special work as biologist for the State Board of Health of which he was at one time a valued member, hospital and sanitarium work, and several years experience as a member of the State Board of Medical Examiners—all this coupled with an intense devotion to the study of his profession and collateral branches of science, render Dr. Anderson a most valuable man for this position. We congratulate the company on their selection and felicitate the people and profession of Raleigh on the notable acquisition to their citizenship.

A GROWING HOSPITAL.

We are pleased to note the growth of the Sarah Leigh Hospital, of Norfolk, Va., of which Dr. Southgate Leigh is the head. Just recently he has found it necessary to increase the capacity of the institution. To accomplish this a commodious dwelling adjoining the hospital has been purchased and will be used as an annex. This will prevent, for a time at least, the delay which has frequently occurred in admitting patients, owing to the inadequacy of the hospital building.

The excellence of the work done in this hospital is too well known to require comment. A feature which will greatly facilitate the finding of nurses when they are desired is the establishment of a registry of graduate nurses. The staff of this institution make it their unfailing endeavor to maintain the high standards of excellence which have always recommended the Sarah Leigh Hospital to the profession. The staff is composed of the following: Dr. Southgate Leigh, surgeon in charge; Dr. Stanley H. Graves, associate; Dr. James H. Culpeper, internal medicine and pathology; Miss M. O. Newton, superintendent.

DR. PAUL P. BARRINGER.

The newspapers have but recently announced the election of Dr. Barringer, long a prominent member of the faculty at the University of Virginia, to the presidency of the Virginia Polytechnic Institute at Blacksburg.

The success of Dr. Barringer as a teacher and the prominence into which his merits have elevated him are peculiarly gratifying to North Carolinians. Born in Charlotte he spent the first years of his professional life in his home county, Mecklenburg, where at Davidson he founded the medical school which later came into other hands and which has more recently been removed to Charlotte. After leaving Davidson he became a member of the medical faculty of the University of Virginia, and for a time served as chairman of the faculty of that institution before the office of President was created. As a further evidence of his ability and of the manner in which the people of the Old Dominion regard him, comes this elevation to the President's office in one of the most important institutions of Virginia. He assumes the official duties of the place at once.

Mr. and Mrs. William Franklin Randolph
announce the marriage of their daughter
Edith Holland
to
Dr. Carl Vernon Reynolds
on Saturday June the first
nineteen hundred and seven
Asheville North Carolina
At Home
after June the fifteenth
21 Woodfin Street
Asheville North Carolina

NORTH CAROLINA BOARD OF MEDICAL EXAMINERS.

At the forty-fifth annual session of the Board of Examiners at Morehead City, June 5 to 8, 1907, there were one hundred and thirty applicants for license to practice medicine in North Carolina. Of these one hundred and sixteen were successful, a considerably larger percentage than has been usual. Herewith we give a list of names of the successful young M. D's:

Adkins, E. H., Southport.
Alexander, E. G., Charlotte.
Anderson, J. G., Asheville.
Austin, F. D., Charlotte.
Baggett, Leaman, Dunn.
Barefoot, J. J., Wilson.
Bass, S. H., Tarboro.
Beebee, W. B., (col.)., Washington.
Best, H. B., Wilson. .
Biggs, M. H., Rutherfordton.
Bitting, H. D., Rural Hall.
Boyd, Miss Lois, Barium Springs.
Brickle, P. D., Woodlawn.
Bruce, W. H. Henderson.
Butner, R. G., Ahoskie.
Capehart, L. B., Raleigh.
Clifford, J. S., Charlotte.
Coleman, G. S., Elizabeth City.
Cox, T. O., Hertford.
Crowson, S. T., Statesville.
Crumpler, Paul, Clinton.
Currie, E. W., Davidson.
Dees, R. D., Grantsboro.
Dick, J. V., Whitsett.

Dowd, J. H., Eagle Springs.
Drum, E. A., Richmond.
Duffy, R. M., Newbern.
Duncan, J. E., Moravian Falls.
Easley, H. O., Boardman.
Easley, P. S., Black Walnut, Va.
Eckel, O. F., Edenburg, Ill.
Edwards, A. W., Gilkey.
Ferrell, Jno. A., Clinton.
Fisher, K. W., Beaufort.
Flowers, C. A., Cashiers.
Floyd, J. W., Green Tea, S. C.
Frizzelle, M. T., Snow Hill.
Gaylor, C. M. H., Roper.
Gibbs, E. W., Ivey.
Gray, E. P., Winston-Salem.
Grayson, C. S., High Point.
Guion, L. E., Unionville.
Haggard, W. A., Wilson.
Holliday, R. S., Fayetteville.
Hand, E. H., Lowell.
Hansel, M. H., Bostick, Ohio.
Harrell, G. N., Potescasi.
Harris, A. G., Fairfield.
Hiatt, F. C., Waynesville.
Hiatt, H. B., Clinton.
Hobgood, J. E., Oxford.
Hood, J. S., Charlotte.
Howe, W. B. H., Jr., Spartanburg, S. C.
Hudson, J. H., Winterville.
Jackson, G. B., Marion.
Jackson, N. E., Carthage.
Knox, Jno., Jr., Lumberton.
Linebach, R. E., Winston-Salem.
Lynch, J. M., Nat'l Soldiers Home, Va.
Mann, Wm., Hertford.
Matthews, J. H., Mt. Pleasant.
Merritt, J. H., Roxboro.
Meyerberg, J. M., Goldsboro.
Mills, J. N., Lenoir.
Mitchell, P. H., Ahoskie.
Moore, Chas. E., Moore Springs.
Moore, J. C., Globe.
MacDowell, Wm., Baden.
McDowell, A. A., Pinehurst.
McIntosh, D. M., Old Fort.
McLean, Peter, Laurinburg.
Nesbit, C. L., Wilmington.
Nichols, A. S., Sylvia.
Noble, R. H., Selma.
Norris, Henry, Rutherfordton.
Ohlinger, L. B., Balsam.
Olive, W. W., Apex.
Oliver, P. W., Apex.
Packard, F. S., Warrenton.
Parker, C. G., Menola.
Parker, F. M., West Durham.
Patterson, C. A., Raleigh.
Perry, E. M., Louisburg.
Powell, E. C., Auburn.
Powers, J. B., Wake Forest.
Price, K. A., Gilbert, S. C.
Query, R. Z., Huntersville.
Reid, J. F., Concord.
Rhyne, R. E., Gastonia.
Robert, P. F., West Raleigh.
Ross, J. K., Charlotte.
Slocum, R. B., Burlington.
Smith, Hapton, Goldsboro.
Smith, S. A., Elkton.
Smith, J. B., Ellenboro.
Stovall, A., Madison, Ga.
Taylor, J. R., Kinston.
Thurston, A. H., New Hanover.
Toulon, A. J., Whittier.
Tucker, H. G., Raleigh.
Upchurch, C. G., Apex.
Wallace, J. W., Huntersville.
Warren, J. W., Edenton.
Watkins, F. B., Rutherfordton.
Willingham, B. J., Hope Mills.
Wilson, J. W., Florence, S. C.
Wood, I. A., Ryland.
Woodward, E. G., Princeton.
Woolsey, I. H., Greenville, Tenn.
York, A. A., Linwood.

The examination questions are as follows:

Chemistry and Diseases of Children, G. T. Sikes, M. D., Grissom.

1. Define an Atom. (a) How always found? (b) What is taken as the standard?

2. Define a Symbol. (a) Also a coefficient. (b) What does each represent?

3. Define a Metal. (a) How many are known? (b) Name the noted exception.

4. What is a Thermometer? (a) How is it made? (b) Name standard brands.

5. What is a Blood Corpuscle? (a) How many kinds? (b) What is the color due.

6. Definite Dentition. (a) At what age does it appear? (b) Name some of its disturbances.

7. What is Ophthalmia Neonatorum? (a) Whence derived? (b) Give treatment.

8. Define Exanthematous Fever. (a) Name three. (b) What ages are exempt?

9. What is Diarrhœa? (a) Acute inflammatory. (b) Treatment.

10. Define Rachitis. (a) Who is most subject to it? (b) How long does the effects last?

Physiology and Hygiene, J. T. J. Battle, M. D., Greensboro.

1. Describe a complete physiological revolution of the heart; foetal and adult.

2. Give origin of salivary and gastric secretions and function of each.

3. Give function of pancreatic and intestinal secretions.

4. Through what media is the blood relieved of effete material and provided with new?

5. How is the blood current maintained and what arteries carry venous blood?

6. What is the function of the cerebellum?

7. If 7th cranial nerve were incised at its exit from stylo-mastoid foramen state briefly the result?

8. Give function of Pneumogastric nerve as related to respiration.

9. Detail uses of the largest gland in the body.

10. What occupations cause a predisposition to pulmonary diseases?

Anatomy, James M. Parrott, M. D., Kinston, N. C.

1. Describe the pubic or pectineal bone.

2. Name the ligaments of the elbow joint (humerus with ulna and radius).

3. Give the relations of the deep palmar arch.

4. Name the divisions of 5th (Trigeminus) pair of cranial nerves and mention in a general way the parts supplied by each (motor, sensory, etc.)

5. Give the boundaries of the inguinal canal.

6. Describe the caecum.

7. Name the contents of the submaxillary triangle and give its boundaries.

8. Mention the hepatic fissures, name the structures found in each and the lobes separated by each.

9. Describe the prostate gland (do not give its relations or its histology.)

10. Name the structures cut in performing a tracheotomy above the isthmus of the thyroid.

N. B. Answer only 8 questions.

Pledge.

Obstetrics and Gynecology, A. A. Kent, M.D., Lenoir, N. C.

1. Given: Primapara at end of 8th month of pregnancy, considerable oedema of the face, feet and legs, urine scant in quantity, slight cephalalgia, dimness of vision, anaemic, weak, short of breath upon slight exertion; (a) give diagnosis; (b) what grave symptom might be expected to follow if patient is not properly treated; (c) briefly outline treatment.

2. During normal labor (a) how and by means of what action is the dilatation of the cervix brought about? (b) what forces are employed in the stage of expulsion?

3. Give diagnostic symptoms of Placenta Previa.

4. How would you treat a case of Adherent Placenta?

5. Prescribe for a case of Pruritus Vulvæ.

6. Name three causes for which you would curette the uterus, and state in which you would use the dull and in which the sharp curette.

7. In Ventral Fixation, (a) what organ is fixed, (b) for what purpose is it fixed, (c) to what (anatomically) is it fixed, (d) what kind of sutures should be used?

8. How would you treat a case of Congenital Atresia of the Cervix?

Sign Pledge.

Materia Medica, Frank H. Russell, M. D., Wilmington, N. C.

1. Name and describe the methods of introducing medicine into circulation.

2. Name an example of [a] an alterative, [b] anti-periodic, [c] anti-spasmodic, [d] diaphoretic, [e] diuretic.

3. Name the alkaloids of hyoscyamus—doses.

4. What are the uses of the bromides?

5. Name the preparations and doses of arsenic.

6. What is the dose of [a] Ol. terebinthinae, [b] Tinct. veratrum viride, [c] Basham's mixture, [d] tincture of aconiti, [e] caffein citrate [f] sparteine sulphate.

7. Why is atropine often combined with morphine when the latter is used.

8. Name three drugs most useful in the treatment of intermittent fever.

9. Write a prescription for an adult with bronchitis, containing three ingredients.

10. Criticise the following prescription:

℞	Argenti Nitratis	gr. xx
	Sodi Chloridi	1 drachm
	Aqua	2 ounces

Sig. 1 drachm every 4 hours.

Surgery, Chas. O'H. Laughinghouse, Greenville, N. C.

1. Give symptoms and treatment of Anal Fissure.

2. Give diagnosis of Strangulated Hernia.

3. Give differential diagnosis between Hydrocele and Inguinal Hernia.

4. Give diagnostic characteristics of Syphilitic Skin Eruptions.

5. In Hæmorrhage of Superficial Palmar Arch, which end of the bleeding vessel would you tie?

6. Give ætiology of Hydro-Nephrosis.

7. Give diagnosis of Mastoid Disease.

8. Give indications for Intubation of Larynx.

9. In an injured elbow, what signs would verify fracture of Internal Condyle?

10. What conditions associated with loss of consciousness must be differentiated from traumatic Intra-Cranial lesions.

Sign Pledge.

Examination on Practice of Medicine, M. H. Fletcher, M. D., Asheville, N. C.

1. Give symptoms of diagnostic value in the first and second week of Typhoid Fever.

2. Give differential diagnosis between Primary Lobar Pneumonia and Acute Pneumonic Phthisis.

3. Give causes and treatment of Chronic Dysentery.

4. Define Leukemia, Addison's Disease, Myxedema, Brachycardia.

5. Give symptoms and signs Aneurysm of the Abdominal Aorta.

6. Give symptoms of Acute Intestinal Obstruction.

7. Give differential diagnosis between Uraemia, Alcoholic Coma, and Cerebral Hemorrhage.

8. Give definition and etiology of Thrombosis in the Brain.

9. Write one, and only one Rx. for Chronic Constipation.

10. Describe the most important symptoms of Cerebro Spinal Meningitis.

Sign Pledge.

Dr. W. T. Parrott, of Kinston, N. C., will leave for Europe in the near future. He will spend several months in study at various Universities and Clinics. The Journal wishes him a pleasant and a profitable journey.

The Tri-State Medical Society holds its next annual meeting in Charlotte Tuesday, February 18, 1908.

The Journal is figuratively, and in the manner of latter day slang, "tickled to death" over the prospect that the Queen City will have the pleasure of entertaining this distinguished body. We, upon our own responsibility, promise the Association evidences of good North Carolina hospitality they are not likely soon to forget.

Review of Southern Medical Literature

Maryland Medical Journal, May, 1907.

The Drop Method of Ether Anesthesia. —Dr. S. G. Davis says that for several years it has been his custom to put a piece of rubber protective over the patients eyes to shield them from the ether vapor. Since adopting this method he has not had a single case of ether conjunctivitis. The face is protected with a moist towel or gauze which extends over the rubber tissue and around the chin. The apparatus usually employed for the administration of ether is a wire frame, patterned very much after the Esmarch chloroform inhaler, made larger in order to give more space under the inhaler for the mixture of air and ether. The outline of the mask curves to fit the face closely. The wire frame may be covered with one or two layers of stockinette or gauze. The air space under the frame should contain about 25 cubic inches—that is about three times larger than the ordinary Esmarch's inhaler. The best covering is about six layers of gauze, which can be quickly applied and thrown away after being used. The wire frame should be boiled immediately after use. The mask is applied over the patient's face and the ether dropped on drop by drop, very slowly at first, then gradually increasing as the patient is able to take the stronger vapor. Finally about the time he will not respond to questions a moist towel or gauze is wrapped snugly around the mask, leaving a small area in the center for the free passage of air through the gauze. By this method the air is prevented from escaping around the edges of the mask and is made to pass through the ether laden gauze. The ether should not be dropped on faster than the patient can comfortably breathe it in. Patients should preferably be anesthetized on the operating table. Such cases as are too nervous to be taken to the operating room can be put on the table in the anesthetizing room and rolled into the operating room after the anesthetic has taken effect. The anesthetizing room should be kept absolutely kept, because all sounds are very much magnified to a patient who is about to pass into the second stage of anesthesia. Never be in a hurry to put the patient to sleep. Do not let an impatient operator worry or hurry you on, but remember that the welfare of the patient, yourself, and frequently that of the operator depends upon the slow and gradual ratio of the increasing concentration of the ether vapor. The patient will become unconscious in two or three minutes and should be ready for the operator in about 10 minutes. When a patient has become anesthetized very little ether dropped slowly but continually will suffice to maintain the proper condition.

Atlanta Journal-Record of Medicine, May, 1907.

The Doctor in Relation to Exercise as a Factor in Medicine and Surgery.—Dr. T. Toepel believes that by bodily exercise one standpoint is meant, progressively arranged and methodically executed movements, involving mainly the muscles and joints, indirectly affecting bones, nerves and organs with the object of correcting and perfecting the human organism from the point of view of strength, skill and health. This is done either alone in a suitable position or with the assistance of others. The system of exercise is divided into: 1. Passive. 2. Active. 3. Resistive.

1. Passive exercise arises when one or more persons perform a movement with or on some part of the patient's body without the patient—by means of resistance or in any other way—assisting in the performance of the movement. 2. An active exercise is one which the patient himself by his own strength performs independently. This is again subdivided into gentle, moderate, and violent exercises, and is governed by the patient's physical condition. (a) A

gentle exercise is one by which a patient of average strength after performing experiences neither fatigue nor breathlessness. (b) When the exercise has caused local fatigue without inducing breathlessness it is termed moderate. (c) An exercise is violent when it is accompanied and followed by breathlessness. 3. A resistive exercise can be performed in two different ways: (a) The patient performs the movement while the operator makes a resistance suitable to the strength of the patient and to the desired effect. This movement is called concentric or shortening. (b) The operator performs the movement with a part of the patient's body while the patient makes a resistance. This is termed eccentric or elongation movement. The local effects of exercise may be briefly stated to be: 1. Increase of blood and lymph circulation. 2. Increase of both constructive and destructive tissue change. 3. Absorption of waste or effused products. 4. Development of the muscles, ligaments, or other structures acted upon. 5. Increased heat production and tissue respiration. 6. Reflex or sympathetic effects upon the vasomotor and through them upon the large internal organs, the liver, spleen, stomach, intestines, kidneys, and the general glandular system of the whole body. Some of its uses are as follows:

It is a measure par excellence for disorders of nutrition, because the general nutritive processes of the body are influenced in a most powerful degree. Anaemia and chlorosis are more rapidly and permanently cured by exercise in the open air than by any other form of medication. In the treatment of muscular rheumatism exercise in the form of massage not only relieves the pain accompanying the disease but also antagonizes the muscular atrophy, which is one of the most constant results. Massage is also beneficial in articular rheumatism; it relieves the pain through its derivative action and also promotes absorption of effused inflammatory products and restores lost mobility.

Virginia Medical Semi-Monthly, May 10th, 1907.

Diphtheria and Some Recent Experiences.—Dr. H. T. Finch says that a most important point worthy of consideration, and one upon which all authors agree, is that no amount of experience will enable a physician to distinguish at once between follicular tonsilitis and diphtheria. What looks like tonsilitis today may be a very bad case of diphtheria tomorrow. The specific direct preventive and curative treatment is antitoxin freely used. Do not be afraid to use this remedy. A careful study of the reports that come to us from the many hospitals of this country and abroad in which the treatment of children is a specialty, and of the testimonials of the leading and best physicians, all go to show the value of this great remedy. Any man who will take time to study the collective investigation and reports for 1897-98-99 and 1900 on antitoxin for diphtheria and croup in private practice issued by the American Pediatric Society and fails to use antitoxin because he does not believe in it and because he thinks it will kill the patient or who thinks a case so mild and waits for severe symptoms utterly fails to comprehend the situation and will be disappointed in results. These reports show that the best physicians use antitoxin as early as possible and repeat the dose as often as necessary. In the case of the author's own child, which seemed to have the most violent form, the symptoms were constitutional from the first —stupor and suppression of urine and high fever. This child was three years old. She was given 2000 units and the dose repeated in twelve hours, and then repeated every twenty-four hours until 6000 units were given. The result of each dose could be seen, but at the end of every twenty-four hours the throat symptoms would return, and therefore the dose was repeated. A warm normal salt solution was injected slowly in the nose and allowed to flow out of the mouth, in this way washing away the debris. In some cases after eight or nine days after giving a dose of antitoxin in those who do not develop diphtheria you may have a slight fever and a rash. This will pass off without any serious results.

Principles of Surgery Lecture XXVII – Suppurative Osteomyelitis Cause, Pathology, Symptoms, Diagnosis, Prognosis and Treatment.—By Dr. Stewart McGuire, Richmond, Va.

The Southern Practitioner, May, 1907.

Treatment of Diffuse Peritonitis. - Dr. L. Burch believes that where serious distention of the intestinal tract has occurred with threatened or actual paresis enterostomy is indicated and is best done by the Wolf method. A distended loop is seized and a purse-string suture placed in an incision made in the center of the part surrounded by the purse-string, a large rubber tube inserted and pushed up toward the stomach, at the same time the purse-string is drawn tight to prevent leakage, the contents of the bowel are drawn off, the tube withdrawn, and the purse-string tied and then re-inforced by a Lambert suture. The Murphy technique is as follows: 1. As rapidly as possible remove the cause of the peritonitis with as little handling of the

viscera as can be avoided; do not sponge or irrigate. 2. Place a tube in the bottom of the pelvis and bring out above the pubis; another drain is brought out through the original incision and the patient put to bed in Fowler's position. 3. A small tube is inserted about two inches into the rectum, to which is attached a fountain syringe and so arranged as to allow from one pint to one quart of salt solution to flow per hour; this rectal irrigation is to be kept up for three or four days. 4. The prevention of peristalsis by withholding food of any character, and also aided by the use of opium if needed. By refraining from sponging and handling the viscera no new avenues are opened for absorption of the poisonous products and much valuable time is saved. By placing the drains as mentioned and with the Fowler posture, assisted by the pump-like action of the diaphragm, the poisonous fluids are removed. The object of the continuous rectal irrigation is to cause a reversal of the flow of the lymphatics, making the peritoneum a secreting instead of an absorbing surface; it also causes the kidneys to act much more freely, thus eliminating toxines, frequently as much as seventy ounces of urine being passed in twenty-four hours. The prevention of peristalsis and in this way preventing dissemination of the poisons by withholding food and purgatives can be appreciated by all.

Atropine given hypodermatically in doses of 1-100th to 1-60th of a grain is a valuable remedy in those cases showing a tendency to intestinal pariesis. Mikulicz has used a solution of nucleinic acid hypodermatically in the treatment of general peritonitis, the object being to produce a hyperleucocytosis and in this way increase resistance. His results in thirty-four cases were very satisfactory, and while it is true that the method of treatment is yet in the experimental stage the author believes the outlook is exceedingly favorable.

The Southern Clinic, May, 1907.

How to Check Post-Partum Hemorrhage.—Dr. R. B. M'Call thinks the best measures for this emergency are those that entirely eliminate the element of delay found in all others. That there is such means at the disposal of the physician may be questioned, but it has been shown by Prof. G. S. Bedford who says "Introduce your hand into the uterus, carry it up to the portion of the organ to which the placenta is partially attached and with the expanded dorsum of the fingers make a gentle but uniform pressure against the bleeding vessels, with the other hand applied to the abdomen make counter pressure; should the womb not contract without an instant's delay employ the cold dash. Let a pitcher of ice water be thrown from a height say two feet suddenly upon the abdomen and repeated without hesitation should it be necessary. Desperate conditions demand heroic measures. Sudden impact produces desired effect because of two-fold shock communicated; womb contracts instantly and firmly, expelling everything contained. The writer is able to recall a case where hemorrhage came on before the cord could be ligated, blood flowing in a large stream, flooding bed, soaking through it and run in streams across the floor to fire-place on opposite side of room. Patient was almost exsanguinated and moribund. A pitcher of cold well water was quickly procured and dashed with some force upon abdomen causing instant contraction of the uterus which assumed the firmness of a solid ball. Hours of careful watching and nursing were required to establish a good circulation. In less urgent cases cloths wet with cold water and applied will fulfill the indication. After object has been gained wet cloths and bed clothes must be removed and warmth applied. No danger of taking cold or from shock; only danger is a lack of decision, intelligence and promptness.

Gaillard's Southern Medicine, May, 1907.

Notes on Hyoscine.—Dr. W. F. Waugh says that it is his custom to study carefully the vasomotor conditions presented by every case of every disease brought to him for treatment. The more these conditions are studied the greater is his confidence in them as indicating the proper therapeutics. In three patients with whom hyoscine caused delerium there was a slow, full, strong pulse. In none of the other cases in which hyoscine succeeded in inducing sleep was this pulse presented. The author wishes here to reiterate his formerly expressed, decidedly unfavorable, opinion of the treatment of the morphine habit by overwhelming doses of hyoscine. The treatment is based on a totally erroneous conception of the pathologic condition present and the indications for treatment. It reminds him of the suggestions a French physician once published concerning sea-sickness. He advised the traveler to go aboard his vessel some days before setting sail and to drug himself into unconsciousness with chloral hydrate, leaving instructions with his valet to repeat the doses whenever he gave signs of returning consciousness. In this way the voyage from Harve to New York could be made without undergoing the terrors of the mal de mer. If that man were typical of his race one need scarcely wonder that it

lost the domination of the sea. In the cases where hyoscine was followed by delirium the author has obtained satisfactory results from the use of solamine in doses of gr. ⅓ every hour for three doses, less if relief comes sooner, administered in two ounces of hot water. Hypodermics of pilocarpine gr. ⅙ also gave good results but less enduring, although he considers this last remedy preferable, as it induces such powerful elimination. The fact that the perspiration caused by pilocarpine carries out of the body five times more solid secretion than normal sweat should be held ever in remembrance.

It seems that every new observation the author makes on morphine cases further limits the place of hyoscine in their treatment. Patients who have been "cured" by it and relapsed are unanimous in their condemnation of it and usually stipulate before beginning treatment that hyoscine shall not be used in their case. The elimination method when applied with skill really leaves no need for anaesthetics.

Virginia Medical Semi-Monthly, May 24, 1907.

Principles of Surgery, Lecture XXVIII, Tumors—Definition, Old Theories of Nature and Origin, Present Views, Clinical and Histological Causes, Diagnosis, Prognosis and Treatment.—By Dr. Stewart McGuire, Richmond, Va.

Prognosis in Chronic Valvular Lesions.—Dr. M'Call believes that the significance of the pulse varies with the different valve lesions. It is not always a trustworthy sign of extent of a valve lesion or of the efficiency of compensation. Irregular pulse in the course of mitral disease is of far less consequence than in aortic lesions—in the former case being frequently due to changes in the intrathoracic presuse during inspiration and expiration. The evidence afforded by the three cardinal symptoms of heart disease—namely, dyspnoea, enlargement, and tenderness of the liver and oedema—are of value. They are of more service, however, in judging of the efficiency of compensation. The degree of hypertrophy and dilatation is of importance in estimating the extent of the lesion; it is of far greater importance as an index of the adaptive capacity of the heart. The occurrence of one or the other of these conditions, or simultaneously, is governed by well-recognized laws which materially aid our understanding of the process. They are taken from Sahlis. 1. Any heart chamber which suffers an increased pressure during systole hypertrophies, corresponding to the greater amount of work, its muscles increase in thickness without an increase in size of the cavity (primary hypertrophy). Note there is no occasion for an increased volume of blood in the cavity. The muscle is here strengthened by a gradual increase in the work it has to accomplish, provided such increase of work is within range of its power. The intra-cardiac pressure furnishes the stimulus to hypertrophy. There is no disturbance of innervation and the inherent irritability of the heart muscle is unimpaired. The hypertrophy which thus ensues in a conservative process. 2. Every heart chamber that suffers an increased pressure during diastole becomes enlarged (primary dilatation). Note there is an increased volume of blood in the chamber, coming at a time when the fibres are relaxed, producing a dilatation even when there is no inherent weakness of the muscle fibre. The cavities are emptied with each systole, (secondary hyvertrophy may follow). The dilatation thus induced is detrimental in that an increased volume of blood has to be handled with each systole, demanding a more marked hypertrophy for the efficient performance of the work of that chamber, a work, however, still within its range of power. 3. Where the conditions for primary hypertrophy and dilatation occur together, the two processes make take place entirely independent of each other. 4. In addition to a primary dilatation a secondary dilatation may occur if the heart for any reason is unable to contract fully and so suffers increased pressure during diastole (secondary paralytic dilatation).

Nashville Journal of Medicine and Surgery, May, 1907.

Charge to Graduating Class.—Dr. R. A. Bare says that we must throw away some of our ponderous dignity, our bad Latin and worse Greek, and speaking with simplicity and truthfulness the best and plainest English we can, show that medicine today is upon a solid foundation of accurate knowledge of specific causes of disease and the changes occurring in the tissues of the human body as the result of disease. The man who really knows medicine can use the English language to express his knowledge and the doctor who uses technical terms is usually, in the language of a distinguished colleague of mine, trying to "obfuscate the mental horizon" of his hearers with what he hopes will be mistaken for the dust of learning. Simplicity is the hallmark of true greatness in medicine as everywhere else. This mark our profession has not always carried in the past. Let us do our small part toward hastening the day when the doctor shall not only know his business but it shall be considered beneath his dignity to cater to the public appetite

for the mysterious and the spectacular.

New Orleans Medical and Surgical Journal, May, 1907.

An American School of Tropical Medicine.—Dr. I. W. Brewer believes that of the many problems that confront the white race in the warmer portions of the globe none is equal to the sanitary problem. Inability to master it was one of the causes of the failure of the French on the Isthmus of Panama and tropical diseases have frequently reduced many a spendid army to a condition of impotence. If we are to become a power in the tropics we must meet the sanitary problem boldly and solve it or we will fail. To do this we must have men trained in tropical medicine and hygiene, but there is no place in America where the student can obtain such training. The great colonial nations of Europe awakening to the need of such instruction have established schools of tropical medicine, and in addition have sent many of their best men to study the diseases of warm countries. Some of the best work in prevention of tropical diseases has been done by Americans. We should be especially proud of the labors of the Army Yellow Fever Commission and the application of the knowledge gained by them by Colonel Gorgas in Havana and on the Isthmus of Panama. The work of Ashford and King in Porto Rico is probably one of the greatest feats in preventive medicine, while in Manila the laboratory under Strong is doing good work. Good as this work has been it has not produced the greatest possible results, because these masters of tropical medicine have not been brought in contact with the students of medical science of today who are to replace them in the great work of conquering the tropics. The student has thereby lost what is probably the greatest of the endowments of his college course, the inspiration that comes from intercourse with the master mind.

The Texas Medical News, May, 1907.

The Mechanical and Chemical Effect of Milk on the Human.—Dr. H. E. Gue says the milk albuminoids are bodies of complex composition, containing carbon, oxygen, nitrogen, hydrogen, phosphorus and sulphur. The way in which they exist differently in the milk of different animals is a fact borne out clinically rather than chemically; it is a fact that undoubtedly suggested the comprehensive term vitality to Prof. Carlyle as related by Mr. Cortelyou in his address of the twentieth annual meeting of the Holstein-Friesian Association. It was this fact that Prof. Holt had in mind when he said that in infant feeding there is a difference among the different breeds; it may be slight but that difference is shown on the delicate human organism, and to the author's mind he must have had the Dutch cow in mind when he said "Select a large, strong, healthy cow and the little difference will not be noticed" and follows up by cautioning the student concerning the fact that tuberculosis is more common in the Jersey than in any other breed. The albuminoids may be divided broadly into two classes: those like the cow and the goat which give a curd on the addition of an acid, and those like the human and the mare which do not. Now the curd found in the cow is composed of casein, which is composed in the main of earthy phosphates, the presence or absence of which causes the difference in the albuminoids of the two classes. Besides casein there exists in all milks a second albuminoid called albumin; this differs from casein by not being precipitated by acids, but will be coagulated by heat. There are other albuminoids described in milk, but enough has been said excepting to allow the author to reiterate that the elements found in the albuminoids vary in different animals, and this without disturbing the general complex make-up of the milk.

The American Practitioner and News, May, 1907.

The Substitution of Heroin and Dionin for Morphine.—By Dr. L. S. Oppenheimer, Tampa, Fla.

Book Notices.

The Practitioner's Library of Gynecology, Obstetrics and Pediatrics, in Original Contributions, by Eminent American and English authors. The Practice of Gynecology—Edited by J. Wesley Bovee, A. M., M. D., Professor of Clinical Gynecology in the George Washington University, Washington, D. C. Large octavo, 836 pages, with 382 engravings and 60 full-page plates in colors and monochrome. The Practice of Obstetrics—Edited by Reuben Peterson, A. B., M. D., Professor of Obstetrics and Diseases of Women in the University of Michigan, Department of Medicine and Surgery, Ann Arbor, Mich. Large octavo, 1087 pages, with 523 engravings and 30 full-page plates of colors and monochrome. The Practice of Pediatrics—Edited by Walter Lester Carr, M. D., Consulting Physician to the French Hospital; Visiting Physician in-

fants' and Children's Hospital, New York. Large octavo, 1014 pages, with 199 engravings and 32 full-page plates in colors and monochrome. Price per single volume, Cloth, $6.00; Leather, $7.00; Half Morocco, $8.00. Price for any two volumes, Cloth, $11.00; Leather, $13.00; Half Morocco, $15.00. Price for the three volumes, Cloth, $15.00; Leather, $18.00; Half Morocco, $21.00.

In the preparation of this new series the object has been to cover the whole domain of the three cognate major specialties, and the result amply justifies the effort. Under the editorship of Drs. Bovee, of Washington, D. C., Carr, of New York, and Peterson, of Ann Arbor, Michigan, the best work of eminent American and English authorities has been united in a set of volumes which certainly form a valuable and important contribution to medical literature. In these three volumes space is found for a complete and comprehensive presentation of the various subjects, with very full and practical details. The authors include with their own observations the most advanced knowledge of established value, and therapeutic measures which have resulted in the greatest success. They have striven above all to make the work practical, yet without neglecting theory. The engraving and full page plates are abundant and illuminating. The number of valuable original illustrations particularly facilitate a clear understanding of the test since almost every obscure point is fully exhibited.

This set of volumes will prove a treasure not only to the specialist in gynecology, obstetrics or pediatrics but to general practitioners because of the vast fund of knowledge presented in such comprehensive form.

The binding is uniform and attractive thus giving the set a most handsome appearance.

Transactions of the American Gastro-Enterological Association, 1906. Chas. D. Aaron, Sect., Detroit, Mich.

A Doctor's Talk With Maiden, Wife and Mother. By G. L. Austin, M. D. Lathrop, Lee & Shepard Co., Boston.

This volume is but the new dress of a work which appeared formerly under a different title. The subject is at present all the more important since the problem of race suicide has assumed so serious an attitude toward the American home. The author treats a delicate subject in a manner which does not offend, yet without saying more than ought to be said.

The Rise of the American Proletarian. By Austin Lewis. Chas. H. Kerr & Co., Chicago, 1907.

Mr. Lewis has sketched a background and drawn an outline that cannot be neglected by the future writer of the industrial history of America. He shows that the proletarian, though a new fact in American political life, is a very importane one. The object is "to show briefly the causes of the origin of this proletarian class in the United States and to describe the mode in which it has made its existence manifest up to the present time."

Ancient Society: or Researches in the Lines of Human Progress; From Savagery Through Barbarism to Civilization. By Lewis H. Morgan, LL. D. Chas. H. Kerr & Co., Chicago. Cloth, $1.50.

This volume traces the progress of the human race from the lowest forms of savagery upward to barbarism and from barbarism to civilization. It shows that in this way the development of all the human race has gone on. More especially are the deductions drawn from the history and experiences of the American Indians.

For the first time the book has been placed within the reach of all classes of readers.

Nephritis. A manual of the disease, commonly called Nephritis or Bright's Disease and of allied disorders of the kidneys. By Seelye W. Little, M. D. The Grafton Press. New York, 1907.

This little monograph on the most important pathological conditions of one of the essential organs is designed for the practitioner more especially. There is a new treatment of the subject in that the author has not followed cut and dried lines and yet the whole is founded upon accurate knowledge of recent research. The style and method of expression employed by the writer is clear and concise, enabling the reader to gain a comprehensive view of Nephritis without a great amount of reading.

Prophet's Landing. By Edwin Asa Dix. Chas. Scribner's Sons, New York, 1907. Price, $1.50.

A direct, straightforward and intensely real story of the growth of an able man in a small New England town who applies modern business methods to the situation with unexpected results to himself and his neighbors. The vivid picture of the town, the charming love story, the striking figure of the Prophet, and the highly amusing sketches of the neighbors,

make a remarkable tale, powerful in its simplicity, delightful in its homely philosophy, and most timely in its extraordinarily real picture of the business methods of today and their effect.

The Pickwick Ladle and Other Collector's Stories. By Winfield Scott Moody. Illustrated. Chas. Scribner's Sons, New York. 1907. Price, $1.50.

This volume of short stories gives a lively account of the way in which Peter Wyckoff and his wife, collectors of great energy, ingenuity, and taste, acquired or did not acquire many rare and precious things.

The stories are dainty in touch, with humor that is real and pervaded by an atmosphere of good society. The writer knows the world he writes about, and the larger world, too.

Experimental and Theoretical Applications of Thermodynamics to Chemistry. By Dr. Walter Nernst. Chas. Scribner's Sons, New York, 1907.

The annual series of Sillman memorial lectures, delivered at Yale University, in the autumn of 1906, on chemical equilibria at high temperatures. The author gives a most masterly exposition of his subject.

The Home Life in Order. By. A. T. Schofield, M. D. Funk & Wagnalls Company, New York, 1907.

Dr. Schofield deals with the subject of personal and domestic hygiene in an untechnical manner, which makes the subject easily understood by all. The neglect of this all important question has inspired the writer to write a book to reach all classes. It deals with matters of practical importance in the home life —how to keep it in order. The book will reach a large class of readers to whom it will prove of immense value.

Transactions of the Indiana State Medical Association, 1906. F. C. Heath, M. D., Sect.

The volume is a most excellent report of the proceedings of the annual meeting in 1906. There are many interestting and valuable papers together with statistics and other information of great value.

Foreign Phrases in Daily Use. Funk & Wagnolls Company, New York and London, 1906.

This diminutive volume is a handy reader's guide to popular and classic terms in the literature of seven languages, with explanations of their meaning. It is a book that every one who reads should have at hand. It illustrates one of the many attractive and distinguishing features of the Funk & Wagnalls New Standard Dictionary, Cyclopedia and Atlas.

Then End of the Game. A novel by Arthur Hornblow. Illustrated. G. W. Dillingham, New York.

It was a foregone conclusion after the great success which attended the publication of his novel The Lion and the Mouse, taken from Charles Klein's play, and now in its 70th thousand, that Arthur Hornblow would soon produce another book on a theme original with himself. The End of the Game, his new novel, will not only add to his reputation as a writer of forceful and polished English, but as a work of fiction it bears all the ear marks of popularity. Mr. Hornblow, in this book, reveals all the qualities of the successful novelist—brilliant technique excellent characterization, graphic descriptive writing, and the ability to tell an absorbingly interesting and intensely human story, with a swift dramatic action sustained to the very last page. The book will appeal strongly to every woman because of its exquisite love romance and the pathos of its closing chapters, and it will hold the masculine interest by the tremendous virility of its central theme, its vivid pictures of metropolitan life, its fascinating story of the rise of an obscure newspaper reporter to a position of great wealth and power in the commercial world, his subsequent weakness and folly and his sensational fall from the dizzy heights to which he had climbed. Briefly outlined, the story is as follows: Roy Marshall, a college boy, falls in love with his sister's governess, Eunice. His father had planned to marry him to an heiress in order to prop up the crumbling fortunes of the house, and to save the situation Eunice goes away, but Roy follows her and they are married. He becomes a newspaper reporter, but discouraged with journalism, he goes to Pittsburg and becomes a steel maker, gradually rising to the Vice-presidency of the Empire Steel Co. The master now of great wealth, the pleasures of life begin to appeal to him, he neglects his wife and plunges into the maelstrom of social gaiety. Eunice puts up with this neglect as long as she can, but when her wifehood is outraged she seeks a divorce. They part, she going south to begin life anew, he continuing in his career of folly. But he soon grows tired of the hollow pleasures of life and realizing the mistake he has made, stifles his conscience by becoming a plunger in Wall street. One

day after a panic, he is seized with a fatal attack of the heart and dying, he sends a letter to the wife he deserted, asking her to come to him, and it is in the death chamber that the two are once more united.

The ending is sad but logical and artistic. There could be no other end. The story is exquisitely told and points a splendid moral. The book presents also a realistic picture of a newspaper office at midnight, as the paper is being rushed to press, and pays a high tribute to the loyal hard working, anonymous newspaper man. Certainly this will rank among the big novels of the year.

Abstracts of the Leading articles of the month.

Intestinal Obstruction Due to Gallstones.—Brentano, Munchener medizinische Wochenschrift, in discussing the operative relief of this condition, calls attention to the necessity for investigating the bile passages and intestine for the existence of other calculi which might give rise to serious complications during the patient's convalescence, as was the case in an instance that he reports in which the patient died as the result of a second obstruction caused by another stone about two weeks after the original operation. He considers that in every case of gallstone ileus the proximal portion of the intestine should be palpated for the presence of other stones, and any that are found should be removed if possible through the same incision as th cone that is impacted. If this segment of intestine is empty, but the gallstone removed displays facts indicating the presence of other stones in the gall-bladder the incision must be prolonged so as to give access to this viscus and permit of its being emptied. This is particularly desirable if the stone removed has a large facet pointing to the presence of another equally large calculus. In view of the possibility that it may be necessary to invade the gall-bladder region, it is wise in cases of suspected gallstone obstruction to open the abdomen by an incision above the umbilicus. The incarcerated stone may easily be removed through this incision, as it is usually in a coil of the ileum. Longitudinal incision of the intestine is preferred to transverse incision for the removal of the stone.

Observations on Anguillula Intestinalis.—Brauns (Munchener Medizinishe Wochenschrift) reports three cases of infection with this parasite and gives a detailed review of what is known in regard to it. His own patients were miners and apparently were not incommoded by the presence of the parasites. The manner in which these individuals became infected could not be determined. As the result of his studies of the subject, the author is of the opinion that it is impossible as yet to determine the relationship existing between the occurrence of intestinal disorders and the presence of the parasites, that is, whether intestinal catarrh encourages the multiplication of the organisms or whether it is itself evoked by them. In view, however, of the circumstances that the parasite lives in the intestinal mucosa, that its youthful forms may occur in the circulating blood, that infection may take place through the uninjured skin, and that in its entire biological relationships there are many points of similarity with the ankylostoma, it is hardly justifiable to regard it as entirely without pathogenic significance. All the cases that have so far been reported in Germany have been sporadic, but it seems advisable to cultivate the study of the parasite with greater interest than has heretofore been the case.

On the Secondary Insertion of the Recti Muscles and Their Clinical Importance.—Howe (Brit. Med. Jour.) says that the supporting fibres of connective tissues passing from the muscles to the globe constitute the secondary insertions of the extraocular muscles. In common with many other muscles of the body, the ocular muscles have their insertions strengthened by tendinous bands. Max Virchow, in a vertical section of the globe near the insertion of the recti muscles has shown that these fibres extend from the edge of each muscle toward the adjacent muscles. These small fibres are, clinically, of greater importance, as they must be divided in order that a tenotomy may be complete.

Acute Lobar Pneumonia in Childhood.—Hayem (These de Paris) studied fifty-one cases of lobar pneumonia in childhood (all terminating in recovery). From these studies the author concludes that lobar pneumonia in childhood is like that in the adult. Diagnosis is, however, often difficult, owing to two factors: First, the late appearance of the physical signs, the pneumonia being central and not coming to the surface until near the end of the attack. Second, the predominance of the nervous phenomena. The prognosis is

favorable, and there is no occasion for very active medication. Attention to the general hygiene and expectant treatment will be sufficient. The employment of drugs is not indicated except in grave, or complicated cases.

The Treatment of Epithelioma of the Skin.—Bizard (Proges Medicale) defines epithelioma, a cutaneous cancroid, as the result of the proliferation of the epithelial tissues of the skin. He sums up the treatment under the following headings: Surgical, radio-therapeutic by cauterization, internal treatment and external treatment. The writer says that radio-theraphy has the immense advantage of being easily applied, and is not painful, and the esthetic results are possibly more satisfactory. The cicatrix obtained is soft, supple and is the least visible. Especially around the angles and commissures of the face is the x-ray preferable. In other words, radio-therapy is the most elegant of all the methods of treatment. However, it is often dangerous, in that the dosage is not accurate. For the cautery treatment, he recommends the usual arsenical paste, applied in the usual manner.

Opsonins and Their Utility in Practical Medicine.—Herbert French in the British Medical Journal, discusses the practical value of opsonins in diagnosis and therapy. His article is practically a review of previous work in this field. In cases of suspected tuberculosis, an opsonic index below 0.7, or above 1.3, is a strong argument in favor of the disease being present. Also, a negative phase continuing for a week following the injection of Tuberculin-R, 1-5000 mg., is very strong evidence in favor of the existence of a tuberculous lesion. In the treatment of tuberculosis by raising the opsonic index through injections of tuberculin, the author emphasizes the importance of frequent determinations of the index. For while the usual course is a fall in the index for about a week ,followed by a rise reaching its maximum at the end of another three weeks, yet individual cases vary from this considerably. As it is of the utmost importance to obtain the best results that succeeding injections be given at a time when the index is highest, its frequent determination is essential. He also emphasizes the necessity of small injections that the negative phase may not be too marked or to prolonged.

The Management of Anorexia.—Sternberg (Allgemeine med. Centralztg.) suggests, as a simple therapeutic device, the artifical induction of thirst. The desire to partake of fluids is very readily aroused by drying the buccal cavity, which is done by preventing respiration through the nose, with cotton pledges introduced into the nares. Together with the fluids, large amounts of nutritive substances may be administered to the patient especially such articles as have been thoroughly chilled—for instance, milk, cream, beer, eggnog, wine, coffee, tea, with or without albumin, yolks or entire eggs, etc., etc.

Calcium Salts in the Treatment of Certain Types of Pneumonia.—Cree (British Medical Journal) believes that it is quite as important to know when to withhold calcium salts in pneumonia as when to prescribe them. He gives the histories of two cases. Case 1 was that of a stout woman of thirty-eight years who was suffering from severe dyspnea, low tension pulse, albuminuria, and was raising over a pint of watery hemorrhagic sputum in twenty-four hours. The picture was that of a patient drowning in her own excretions rather than dying from a toxemia. She was of the hydremic type and her condition was regarded as due to an insufficiency in the coagulability of the blood. Diet was restricted and she was given twenty grains of calcium chloride in water by the mouth. Ten grain doses were continued hourly for twelve hours, and were then reduced to every four hours. Half a day showed a decided improvement in the patient's condition. The sputum in particular was reduced to half its previous amount, and the bright hemorrhagic appearance gave way to a dull, rusty color. In Case 2, that of a thin woman of twenty-five years, the clinical course of the disease was from the start very different, the case running throughout a "dry" course. In this case thrombosis was feared and the aim was to decrease or rather to prevent any increase in the coagulability of the blood. The patient was allowed soft diet and fruit, and was encouraged to drink lemon juice in water. The author makes a plea against the unreasoning use of the calcium salts in pneumonia. In the first type it renders real service; in the second there is no logical reason for its adminstration and there is one very good reason against it.

Morphinomania Treated Successfully with Atropine and Strychnine.—Strangman (British Medical Journal) reports the case, that of a man addicted to over thirty years' use of this drug. His latest allowance was two wine-

glassfuls of laudanum in the day and he presented the usual symptoms of the habit. The treatment was begun with atropine sulphate 1/100 grain and strychnine nitrate 1/60 grain three times daily, increasing as rapidly as the patient could bear until on the eighth day his dosage was atropine 1/50 and strychnine 1/20, but it was soon necessary to reduce the atropine to 1/60. Under this plan of treatment immediate beneficial results were noted. Finally the atropine was stopped and the strychnine continued a while longer. The opium was suddenly withdrawn in this case with the usual result of nausea, vomiting, and diarrhea, but the patient finally weathered the storm.

The Physiological Action of Whiskey on the Circulation.—Charteris and Catheart in the British Medical Journal note that many pharmacological experiments which have influenced the ideas of physicians as to the effects of alcohol on the system have been made with pure alcohol and not with the forms in which it is employed in medicine, such as brandy, whiskey, champagne, and port wine. It is difficult to define just what whiskey is. In Scotland it is the pot-still product and not the patent-still product. The former is more complex in character and may contain secondary ethereal products; the latter is a poorer and cheaper substance. The authors made a series of experiments on three men, practical abstainers, noting the relative effects on the circulation of absolute alcohol and whiskey. The dose given corresponded to one ounce of absolute alcohol and sufficient water was added to make the dilution of alcohol one to four. The conditions under which the experiments were carried out are fully specified. In general terms it may be said that the effect upon the pulse and pressure of all three alcoholic preparations, in the above dosage, was very slight, and that after the first ten minutes practically no difference could be detected in action between the absolute alcohol and the whiskies examined. In other words, the action of whiskey on the pulse and pressure depends upon its alcoholic content and not upon any special body distilled over either in the process employed in the manufacture of pot-still whiskey or in that used in the preparation of the patent-still whiskey. The same result was obtained in a series of pneumonia cases and a series of intravenous injections on rabbits.

The Effect of Injections of Cocaine on the Sensibility of the Abdominal Organs.—Kast and Meltzer (Berliner klinische Wochenschrift) point out the apparent discrepancy between the statements of Lenander and other surgeons who have found that the abdominal viscera, even in the inflamed state, have no sensibility for painful stimuli, and the constantly occurring clinical observation of severe abdominal pain in many different conditions. By an extensive series of animal experiments the authors were able to show that while it was true that surgeons who operated under local anasthesia did not find that manipulation of the intestine or other abdominal viscera was painful, this condition was the result of the injections of cocaine used to anesthetize the skin for the abdominal incision. In animals (dogs and cats) the injection of 0.02 to 0.03 g. of cocaine sufficed to render painless stimuli to the intestine that without the cocaine would have been resented. It seemed to make little difference whether the site of injection were close to the seat of operation ir at a distant part of the body, such as the extremities. Intramuscular injections were found to be more promptly effective than hypodermic injections, and the authors express the view that the mode of action is through the medium of the circulation. The sensibility of inflamed organs in untreated animals was found to be greater than that of uninflamed organs, but the action of the cocaine injections was equally pronounced in such cases. Another observation made was that the cocaine injections had a distinctly quieting effect on the post operative restlessness of animals that had been subjected to ether anesthesia.

A Study of Some Tropical Ulcerations of the Skin with Particular Reference to Their Etiology.—Richard P. Strong's (The Philippine Journal of Science) observations have led him to conclude that a number of forms of chronic ulceration of the skin are to be encountered in Manila, among which (after excluding certain ulcerative lesions of syphilis, yaws, leprosy, and lupus) there still exist at least several types of different etiology. A somewhat rare form is evidently of blastomycetic origin, in which the torulae encountered have somewhat the appearance of the forms which have been described in certain cases of Oriental boil or sore as species of protozoa related to the Donovan-Leishman bodies.

Clinical Observations on Mucomembranous Colitis.—Liddell (London Medical Lancet) gives a general description of the disease. In considering treatment he refers particularly to that employed at Harrowgate. At the out-

set of treatment we must naturally eliminate any known cause. The original exciting cause may be no longer in operation. Next one must adopt the best means of overcoming the stasis of the bowel and procure a regular and complete evacuation of its contents. The necessity of this is apparent since it is the retention of mucous secretion, feces, products of putrefaction, and microbes which causes the constitutional disturbances and increases the local irritation. Moreover, requisite means have to be taken to improve the mucous membrane and the muscular coats of the intestine. For evacuation of the bowel aperients prove unsatisfactory in colitis. They never effectually clear the bowel without producing considerable local and general disturbance, and really aggravate the condition. As they lose their power in course of time the patient requires to take larger quantities and take them more frequently, thus making the local condition increasingly worse. Probably the best means of evacuating the bowel and at the same time lessening its irritation is by colon irrigation. When this is properly administered it clears the bowel more effectually than aperients do, and instead of having a pernicious effect its action is most beneficial. A somewhat extensive experience has taught the author the value of this method and that it is by far the best way to commence the treatment of colitis. It has to be carried out with very great care and under certain restrictions, as it may do harm instead of good. But properly administered its value is undoubted. The fluid used must be of a bland unirritating nature. It must also be given under a low and equable pressure or painful spasm will occur and irritation of the colon. The temperature and the quantity of the fluid are also matters of importance. The remainder of the paper is occupied with a description of the details followed out at the Harrowgate institutions.

Diseases of the Upper Air Passages in Relation to Life Assurance.—Kelson in the London Medical Lancet, dwells particularly on paralysis of the larynx, laryngeal tubercle and syphilis, nasal obstruction, the condition of the tongue, and nasal discharge suggesting disease of the accessory sinuses. He suggests that the life insurance examiner should include in his category of questions such inquiries as "do you ever suffer from hoarseness or difficult breathing," "can you breathe freely through the nose," "have you any mattery discharge from it," "is your tongue sore," etc., and on the replies obtained thereto advise his company as to the acceptance or postponement or rejection of a given risk.He points out the possible dangers which might result in case of an affirmative statement by the patient to the foregoing questions. He considers the tongue condition as of special importance. It may give valuable indications of the applicant's past life history and habits, such as a tendency to chronic alcoholism, as shown by the furred tongue inclined to tremor with a more or less caracteristic odor of the breath. In chronic superficial glossitis, also, we have a complaint both common and important with its various forms or stages, as leucoma, psoriasis of the tongue, and the red glazed smooth form. Its exact etiology may be somewhat obscure, but syphilis, excess in smoking, and alcohol (especially spirits), stand out preeminently as contributors to its development, and gout and rheumatism are also believed to be factors. As regards leucoma and cancer it may be said that leucoma is a very strong predisposing cause of cancer, and if in a case of leucoma any ulceration with induration is found, we may be pretty sure that the carcinomatous stage has already been reached.

Diagnosis of Dementia Praecox through the Handwriting.—Obraztsoff (Roussky Vratch) considers in a very interesting article the characteristics of dementia praecox as shown in chirography and in composition of letters. A considerable number of cases which the author observed convinced him that dementia praecox is characterized by such marked peculiarities in this respect that by examination of letters and other writings of these patients the diagnosis can be made quite definitely. In 1904 he published an article on the handwriting of the insane in which he showed the main characteristics of the writing of dementia praecox. Similar work was done in 1905 by Rogues de Fursac. Some of the patients exhibit a perfect mania for writing. They fill page upon page with disconnected phrases, repeating themselves in a stereotyped way. They copy very willingly all that may happen to come under their notice without any sense of practical value. Other patients, however, feel no desire for writing, but will write when asked to do so. Finally, a third class of patients become unable to write. From the viewpoint of chirography their handwriting is marked with great carelessness, includes a mass of corrections, and is illustrated with drawings of extremely naive character. There is no regularity in the arrangement of lines in letters, the size of letters varies extremely, the writing

being either very small or very large in different parts of the line or page, or new forms of letters are sometimes created. As to chirography, we find here the features of melancholia as well as those of mania alternating again with those of depressive conditions. From the psychological viewpoint the writing of these patients shows a correspondence with neither their age, their education, nor their social position. Any knowledge that may have been acquired before the disease set in is exhibited only in flashes, occasionally cropping out amongst commonplace or inconnected matter. Psychical automatism is also manifested in the writings of these patients. They have delusions of grandeur and of persecution, which are also manifested in their letters. Their construction is often original, with peculiar phrases and turns of speech, and sometimes their letters are interspersed with symbolic signs.

Treatment of Arterio-Sclerosis.—Senator (Die Therapie der Gegenwart) says that the early changes of arterio-sclerosis are not demonstrable clinically, and that when this is possible the disease process is far advanced. One cannot depend upon an increased blood pressure as an early sign, this depending upon the condition of the heart. He gives the condition to be met in arterio-sclerosis as follows: (1) Removal of the cause; (2) modification of the process; (3) alleviation of the symptoms; (4) prevention of serious complication. Regarding the cause of arterio-sclerosis he says chronic intoxication and infection are the most important. While arterio-sclerosis is frequently accompanied by increased blood pressure, this condition alone does not produce changes in the arteries. It is often observed as a senile process with low blood pressure as well as in young persons, due to syphilis and chronic intoxications, such as alcohol, tobacco, lead, mercury, etc., without a preceding high blood pressure. The writer believes that strong coffee, tea, meat extracts, gout, diabetes mellitus, chronic nephritis, autointoxication produced by excessive meat eating, may all cause this condition. Consequently the first indication is to prevent these changes by eliminating, or reducing, controllable causes. A lacto-vegetarian diet made up in the largest part of carbohydrates and fats is very commendable. This diet, however, is not applicable to fleshy people, who are commonly afflicted, or when the condition is due to diabetes. The iodide preparations are recommended to lower the blood pressure. Iodipin (1 gram. gellatin capsule 3 to 4 times daily). Sagodin (0.5 gram. tablets 4 to 6 times daily) alone, or a combination of the nitrites with the iodides, are very effective. Sodium or potassium iodides 6 to 8 grams; sodium nitros, 1 to 2 grams; aqua. ad. 200. One teaspoonful t. i. d. in milk. Another preparation is tr. iodini, 1 gram., spir. ether. nitr., 30 grams; take 20 to 30 drops 3 to 4 times daily. Nitroglycerine .1, spir. ether. nitr., 30; 15 to 20 drops t. i. d. is also useful. Warm baths of the different mineral waters are recommended in the diffuse processes. Massage and passive gymnastics must be given with great care. "Truneceks serum," "anti-sklerosin" or "Regenerol," depending for their action upon an addition of the normal salts of the blood, which are supposed to be absent in this condition, he says, have not been established as especially beneficial. He admits, however, their harmlessness and advises their trial. For the symptomatic treatment of the severe colics and cramps caused by this condition morphine is considered the best agent.

Carcinoma Mammae in the Mouse.—Bashford and Murray (Roussky Vratch) describe certain anatomical and pathological features of sporadic tumors occurring in the mouse. Several illustrations are included setting forth their findings in their series of animal experimentations. They believe that these growths are epithelial in nature, are malignant, and are identical with similar malignant new growths in the human subject. This being the case, they claim that their methods have an important practical bearing on the present work of cancer research. They describe the arrangement of the mammary structures in the mouse and present a section illustrating the histology of the normal structures. The tumors first appear as roughly spherical swellings, usually placed asymmetrically with reference to the nipple as in the human subject. The looseness and elasticity of the skin may permit growth to proceed without invasion of the chest wall, although the lungs may be almost completely replaced by metastatic growths. Lymphatic glands in the neighborhood may also show secondary deposits. These mammary growths frequently appear on the removal of the skin to be completely encapsulated by a fibrous layer of varying thickness, but this capsule is usually invaded by strands and columns of tumor cells. The illustrations demonstrate, the authors claim, that they are dealing with new growths of the mammary region of the mouse, which grow progressively (recur after incomplete removal), infiltrate the surrounding normal tissues, and produce metastases of the same histological type in the lungs and lymphatic glands. They lead to the death of the ani-

mal. The conclusion is inevitable that they are malignant new growths of the mamma.

Relation of Chorea with Tuberculosis.—Toutain (These de Paris) found that lumbar puncture showed a lymphocytosis five times in the seven cases of chorea in which he examined the cerebro-spinal fluid. According to him this find would indicate that the organism had been invaded by some intoxication or some infection. In a certain proportion of the cases this infection is rheumatism. In others there is found scarlet fever, measles, whooping-cough or tuberculosis. In one observation the choreic syndrome was produced by tubercular granulations disseminated on the pia mater in the neighborhood of the motor zone. In other cases small granulations developed along the vessels in the neighborhood of the fissure of Rolando. Various hypotheses are offered in explanation by the author.

Inflammatory Neoplasms of the Pelvic Colon.—Cavaillon and Bardin include in inflammatory neoplasms tuberculous neoplasms with and without tubercles, syphilitic neoplasms, and true inflammatory neoplasms, due generally to infection by germs within the intestinal lumen. The tubercular lesions may be in the active stage, with bacilli included in tubercles, or in the cacatricial stage, when the original tissue has been displaced by sclerosed masses. These scleroses may be produced by toxins alone without bacilli themselves being present. The endo-intestinal and peri-intestinal inflammations that occur aside from syphilis and tubercle result from the microbes habitually present in the intestine, and are ordinarily harmless. They are associated with infection in the intestinal diverticula and inflammatory pericolitis. The diagnosis of inflammatory neoplasms is rarely made until the abdomen has been opened for operation, or at the autopsy. Cancerous growths are small, circumscribed, and produce marked stenosis, while the inflammatory growth is much more diffused, involves a longer section of bowel, and the infiltration of the coats is more marked and of uniform contour. The bowel feels thick and softer, though coarser. The peritoneal reaction about the tumor is marked, the omentum is adherent, and there may be small abscesses in its mass. The walls are very thick and partially close the lumen, while above them the intestine is dilated and the mucous membrane ulcerated. All the coats in simple inflammatory neoplasm present lesions of simple inflammation, but the most marked are in the submucous layer, arising from mucous diverticula and glandular culs-de-sac. There are three types of tuberculosis in the sigmoid flexure: ulcerated tubercles, hypertrophic tuberculosis, with or without specific lesions, and plain inflammatory tuberculosis. In the hypertrophic form there may or may not be tubercles present. The walls are much thickened, especially the submucous layer; there is sclerolipomatous change in the walls, adhesions, and enlarged glands. The characteristic of tuberculosis without tubercles is that of submucous sclerosis with rare giant cells. Inflammatory tuberculosis arises from the defensive reactions of the intestine, and is characterized by cicatrization. Such lesions may result from retrograde changes in tubercular tissues, or from the simple action of the tubercular toxins. Syphilitic neoplasms with inflammatory tumors are most marked in the submucosa, and the sclerotic changes begin about the vessels. The pathologic differences between these types of chronic inflammation are marked. The simple inflammatory growths arise around glandular tubes and diverticula. In syphilis sclerosis is perivascular; in tuberculosis there are localized lesions in the submucosa, or diffused lesions unlocalized. The same symptoms are common to all: occlusion of the pelvic colon, or suppuration in the iliac fossa, alternating diarrhœa and constipation, blood and mucus in the stools, sometimes tenesmus and distention of the intestine above the growth. Cachexia may be marked. These tumors are benign in themselves, malignant in their evolution. Treatment is generally operative. Suppuration requires drainage; acute occlusion requires an artificial anus. Radical operation is satisfactory in theory, and many cases recover after laparotomy with colectomy. Some recover without operation by retrograde metamorphosis under palliative treatment. Inflammatory tumors require incision when pus collects and medical treatment afterward. Accidents demand ileoresection. Tuberculoma, outside of complications, or cicatricial metamorphosis, requires ablation in three stages.—Gazette des Hopitaux.

On the Use of Atropine in Poisoning by Morphine.—Roch (Bulletin general de therapeutique) recently undertook physiological and clinical experiments to establish clearly whether the well known physiological antagonism between the action of morphine and atropine could be utilized in a case of opium poisoning in man. He observes that the respiratory center in man is certainly more sensitive to the action of morphine than that of the rabbit. The clinical results, therefore, of the administration of atropine are necessarily less striking than those obtained in the laboratory. Moreover, there is a point in both the animal and in man at which the quantity of

morphine is so much in excess that the antidote is not able to overcome its effects. If in such a case the dose of atropine should be gradually raised, we shall soon arrive at a point at which the large dose, instead of exciting the respiratory centre, actually depresses it still further, and at the same time produces injurious effects on other organs, and particularly the circulatory system. Under such circumstances one intoxication is merely added to another, and only hastens the fatal result. Roch's conclusions are formulated as follows: 1. In certain cases of poisoning by atropine, we may administer large doses, actually toxic doses, of morphine, and with success. 2. There are on record a number of cases of mixed poisoning, where the absorption of atropine simultaneously with that of morphine has prevented the latter from developing all of its narcotic effect and its depressing effect on respiration. 3. Cases of poisoning by morphine, which were treated by belladonna or its alkaloid, and favorably influenced, abound in medical literature. The amelioration manifests itself most rapidly when the remedy has been given hypodermically. 4. Finally, there exist also reports of numerous cases in which the action of the atropine appeared to be *nil* or even injurious. Experiments have shown that failure is caused either by an excessive quantity of the poison or by the injudicious use of the counter poison, too large a dose usually; too small a dose more rarely. The injection of small doses under the skin, say, two milligrammes repeated several times, appears to be the method of choice. In every case, however, it is necessary to stop the series of injections when the myosis produced by morphine begins to be replaced by the atropine mydriasis. It is hardly necessary to state that in a given case of poisoning by morphine, the treatment by atropine should not be resorted to until after having used all the evacuants and antidotes possible. Moreover, when confronted with a serious case, we should neglect no means which may be capable of reawakening the respiratory centre. As adjuvants of atropine, the author therefore recommends flagellations, cold effusions, revulsives, and even moderate doses of caffeine, strychnine, etc. In alleging that atropine is useful in cases of morphine poisoning, it is desired neither to assert that it is the only treatment which deserves to be employed nor, especially, to declare that it is all powerful.

Nasal Reflexes.—Kuttner (Die Nasalen Reflexneurosen) says that the term "normal" or "physiological reflex" designates the involuntary stimulation of centrifugal nerves, when this is the direct result of the stimulation of centripetal nerves. A nasal reflex may accordingly be produced by any stimulation of the olfactory nerve and of the trigeminal branches which supply the nose. The various reflex processes determined by way of the nose include typical examples for all the forms under which the physiological reflex may manifest itself. The act of sneezing is based on a motor reflex, lacrymation upon secretory nerves, repletion and evacuation of the cavernous bodies upon vasomotor reflexes; the so-called inhibitory nerves functionate in the changes of the respiratory and circulatory rythm. Normal reflexes are regarded as processes and actions which are carried out in answer to a definite stimulation, without the conscious control of the individual, but still governed by certain laws. The stimulation is transmitted to the central organ by way of the centripetal nerve. As soon as a definite degree of strength is reached a certain stimulating effect is produced upon certain centrifugal nerve tracts. The reflex at first remains limited to nerves rising at the same level where enter the stimulated sensory nerves. As the degree of the stimulation increases, the distribution of the reflex activity, which is essentially continuous, likewise increases up to a certain degree. The indefinite distribution of the stimulation in the central organ meets with certain obstacles. In the first place, there is the resistance furnished by the stability of the central organ itself. This resistance must be overcome step by step, as it were, resulting in progressive diminution or weakening of the stimulatory force. In the second place, the brain itself may have an inhibitory influence upon the determination of the reflex process. There is an area of the brain (optic lobe) stimulation of which immediately interrupts a number of reflex processes. This organ is in connection with all the remaining regions of the central apparatus through its inhibitory fibers, and is supposed to be in a constant state of tonic stimulation. (Setschenow.) Many reflexes can be suppressed at will. Volition can, however, suppress only those reflexes which it is able to produce, and even those only to a limited degree. The will is powerless as far as involuntary reflexes are concerned. These voluntary inhibitory fibers are apparently different from the involuntary ones. The determination of a given reflex may finally be interfered with or entirely suppressed by the simultaneous stimulation of other sensory nerves or nerves of special sense.

Pathological Reflexes.—"Diffuse abnormal reflexes," or "reflex spasm," designate the abnormal increase or distribution of reflexly produced phenomena. In certain cases there is a disproportion between cause

and effect, the effect as determined by a stimulus of a definite strength being more marked than it would be under normal conditions. However, the entire process in these cases still remains limited to the normal reflex tracts. This type is represented in the nose by the various forms of nervous coryza. An abnormal distribution of the reflex process is present in those cases where the stimulation in the reflex center passes beyond the customary area. Conducting paths are rendered active by the stimulus back of the reflex process, which under normal conditions are not excitable at all, or at least not in this particular co-ordination. Clinically, the pathological distribution of the reflex area as a rule is associated with the increase of reflex irritability, as illustrated by reflex asthma or epilepsy. Factors of ætiological importance in this connection are: Diseases of the central and peripheral nervous system, certain intoxications (strychnine), infectious diseases (tetanus, lyssa) and extraordinarily powerful stimuli, such as occasionally occur, for instance, in very severe neuralgias.

Not only is the inherent irritability of the central organ considerably increased in all these cases, but in addition the resistance, dependent upon the arrangement of the central organ itself and the disposition of the inhibitory fibers, is diminished to such an extent that every stimulation is distributed far around the most various areas. If the pathological condition which determines these phenomena persists for a certain length of time, some peculiar relations seem to develop in the central organ, causing the originally non-physiological association of the centripetal and centrifugal conducting paths to become a permanent institution of the organism. A convincing example is furnished by epilepsy, in those cases which are due to foreign bodies, scar tissue contraction or similar causes. The complete subsidence of the attacks may be counted upon with any probability only if these causative factors can be removed at the onset of the disease. If the affection has existed for any length of time the pathological reflex path has become so easily passable that any sort of stimulus, any physical or sensory excitement, is capable of determining the pathological reflex. In this stage the removal of the original causative factor does not as a rule have a curative influence upon the disease.

Reflex irritability may be diminished, constituting a third variety of pathological reflex, but little discussed in text-books. In these cases the stimuli which under normal conditions determine certain associated sensations or reflexes bring about no action at all, or have an effect below the normal standard. Such conditions are met with especially in certain diseases of the nervous system, especially hysteria, and in intoxications (morphine). Although these negative phenomena may occasionally prove distressing enough, they do not play an appreciable part in the discussion of pathological nasal reflexes, because a diminution of the normal reflex irritability of the nose is hardly ever associated with disturbing symptoms.

Whenever a pathological increase of the reflex irritability is referable to some disease of the nervous system, it must be kept in mind that two fundamentally different types of the pathological reflex may enter into consideration:

1. Organic changes in the nervous apparatus of the reflex arc, such as are caused by various diseases of the nervous system (tabes, sclerosis) or by intoxications (strychnine).

2. Functional disturbances in the nervous apparatus of the reflex arc, including all those cases in which no anatomical basis is demonstrable at the present state of our knowledge. All the deviations from normal reflex activity and normal associated sensation, developed upon this basis, are comprised under the collective designation *reflex neuroses*. A number of these affect the nose.

The Treatment of Haemoptysis.—Hichens (The Practitioner) discusses the treatment of hæmoptysis thus: The three chief indications are to give all possible rest to the lungs and heart, to lower the blood pressure and to increase the coagulability of the blood.

Rest to the lungs and the heart is obtained by complete rest in bed, and by not allowing the patient to get up for any purpose unless he happens to be one of those patients who cannot pass a motion in bed without great agitation and difficulty. In such a case it may be best to allow him to get up quietly and slowly for the purpose. Another measure which will soothe the patient and give him bodily and mental rest, quieting the cough and relieving mental apprehensions, is morphia, given either by the mouth or under the skin.

In order to lower the blood pressure we may combine various measures.

(a) Posture will alter the effects of gravity and prevent passive congestion of the lung. The patient should not lie flat, but be well propped up with pillows or a bed-rest.

(b) Diet, a restricted diet, somewhat after the method of Tufnel's diet for aneurism, will help. The diet should be cool, given in small quantities at a time and with a

diminution of liquids, and a small quantity of easily-digestible solids, such as minced meat, or minced chicken in the form of sandwiches. Thirst may be combated by allowing small pieces of ice to be sucked.

(c) Derivative medicines, which will carry away fluid from the blood and dilate the abdominal blood vessels. The most convenient for this purpose are mild saline purgatives.

A combination of magnesium and sodium sulphate is often sufficient, or if the patient is constipated by the morphia, which is so often necessary, a 5-gr. colocynth and hyoscyamus pill in addition will generally be enough.

(d) Vasodilators.—If we cannot stop bleeding from the lungs by vasoconstrictors, we can certainly influence the blood pressure in the lungs by vasodilators, either immediately and evanescently by inhalations of nitrite of amyl, or more gradually and continuously by glyceryl nitrate, or erythrol tetra-nitrate (gr. 1-10 to 1-2).

The third indication to increase the coagulability of the blood may be accomplished by giving 15 to 20-grain doses of calcium chloride (or, better, calcium lactate) either three times a day or more frequently, such as four or six hourly. This must not be given for more than three or four days at a time, otherwise the effect will be the reverse, and the blood will become less coagulable.

Infantile Mongolism.—Comby (Arch. de Med. des Enfants) reports 14 observations on typical cases. The term "mongolism" refers to a variety of congenital idiocy which is characterized by the Mongolian expression of the face, suggestive of individuals of the yellow race. The majority of cases are observed in young infants, because the patients are extremely delicate, dying early from intercurrent disease or undernutrition. From the ætiologic point of view, the physical condition of the parents, especially of the mother, at the time of conception and birth, seems to be important. "Mongolism" is very commonly confounded with myxœdema. These children are, however, of a more lively disposition, with excitement, restlessness, insomnia, etc., in contradistinction to the quiet, apathetic, myxœdema patients. The latter are smaller, with crooked limbs and a curved spinal column; the hair is scanty, harsh and dry. Mongolian idiots, on the other hand, are straight of limb and their hair is approximately normal. The prognosis of this condition is much more unfavorable. Thyreiodi treatment has practically no effect in these cases. Occasionally it seems to assist the growth and to cause the superfluous fat to disappear, but at the same time it excites the patients too much, rendering them sleepless and very noisy. Children who present the milder forms of Mongolian idiocy can sometimes be trained to learn some simple trade. The majority, however, progress to hopeless idiocy.

Treatment of Eczema.—Waldo (British Medical Journal) states that it is now admitted that eczema is not caused by a parasitic organism. The coccus, which appears in mulberry-shaped masses, and which was named morococcus by Unna, is now thought to be a staphylococcus of low virulence frequently found on the skin. Sabouraud has shown that the vesicle of eczema is at first sterile, which quite puts out of court the presence of any specific micro-organism. It follows, therefore, that anti-germicidal applications are not called for, and indeed have often made a pure and simple eczema much worse by irritating it. Care must be taken to exclude seborrhoeic dermatitis, which is only benefited by certain antiseptic remedies.

No doubt various food toxins and the products of imperfect metabolism and malassimilation by circulating in the blood can produce erythemata as well as other conditions of the skin, and if they cannot often produce an eczema, they may aggravate it and possibly produce it in a predisposed subject. To counteract this tendency, diet the patient, and prescribe correctives, of which salicin is one of the best in these cases. Water taken between meals is also helpful. All that is required locally are quieting and protective applications. If for any reason sodium chloride is retained beyond the normal quantity, the excess entails the retention of an additional quantity of water to hold it in solution. The surplus salt and water under certain circulatory conditions passes out of the blood into the tissues, and in this way eczema may be kept up, so that it may be necessary to lessen or cut off the common salt the patient is accustomed to take with food. So many cases of eczema are produced by susceptible individuals handling poisonous plants, such as the Primula obconica, as well as many chemical and other substances, that one has to be constantly on the look-out for this cause.

Eczema depending chiefly on a neurotic tendency, and usually occurring in people who are broken down in general health, is difficult to manage, and is not much benefited by ordinary treatment; unless a change into the country is insisted on. If this is not practicable, perhaps cod-liver oil does as much good as any internal remedy. Inquiry as to the amount of sleep the patient gets is also important, as there is no better restorative for nervous conditions.

It is almost unnecessary to mention that cleanliness of the eczematous surface should be carried out with a weak alcohol, as diluted methylated spirits; or, if the eczema is very acute, with weak warm gruel instead of soap and water. As Lionel Beale used to say, few people know what a healing remedy spirit is to the skin.

Where much thickening has occurred, and especially if fissures have formed, eczema rimosum, nothing does so well as local dressings of some reducing agent, as salicylic acid in various strengths. In severe cases of eczema, and when an extensive surface is involved, the good effect of rest should be remembered, and the patient confined to bed.

Although alcohol is valuable externally, it disagrees if given internally in eczema by dilating the peripheral vessels. It is not too much to say that if an adult's eczema is receiving suitable treatment to which it does not favorably respond, the abuse of alcohol should be suspected. If the surface of an eczema does not show much redness, a weak preparation of spirit and tar painted on once or twice in the twenty-four hours, in addition to the ordinary application, at once relieves the itching and cures the eczema if the case selected is found to tolerate this interference.

Incipient Tuberculosis.—Hay (Lancet) takes up the question of the early diagnosis of consumption, especially as met with in dispensaries. Cough is almost invariably present as one of the first signs; it is due in some cases to congestion or catarrh of the lung, to pleurisy, or to early involvement of the larynx. The cough is usually short and ineffectual. Hæmoptysis, if genuine, is of paramount importance in the history. It may occur before there are any demonstrable physical signs in the lungs, and when associated with a history of cough, is almost pathognomonic. It is rarely profuse in the early stages, sometimes being only streaks in the expectoration. It may be due to hyperæmia of the parenchyma, or bronchial mucous membrane, to softening of a small focus of disease and the opening of a minute vessel, to ulceration of a tuberculous patch in the bronchial mucous membrane, etc. Pain and tenderness in the chest may be of no moment or may indicate pleurisy. Tachycardia without pyrexia, but with constitutional disturbance, is occasionally the first symptom, or sometimes the case is taken for one of chlorosis.

In considering the value of physical signs in the diagnosis, it must be borne in mind that the localization of physical signs is of much greater moment than their quality; it is a safe plan to attach much weight to the presence of certain signs, little weight to their absence. It is always unwise to base a diagnosis on any one physical sign, and very definite variations from the normal are very often met with in perfectly sound chests.

Incipient pulmonary tuberculosis and influenza are frequently confused. The initial symptoms of tuberculosis are often diagnosed as influenza; an attack of influenza, with its consequent debility, may be followed by tuberculous infection; and, finally, influenza may light up a quiescent tubercular lesion.

Tuberculosis and Syphilis.—Marshall (British Journal of Tuberculosis) says the diagnosis between tuberculosis and syphilitic affections is often very difficult, and many cases are probably diagnosed as tuberculous which are really due to syphilis, or, more commonly, hereditary syphilis. The discovery of tubercle bacilli in a lesion does not exclude the syphilitic origin of that lesion. Hybrid lesions exist which are caused by the implantation of the tubercle bacillus in a syphilitic or heredo-syphilitic soil. Syphilitic heredity is a strong predisposing cause to tuberculosis, and many consumptives are recruited from the ranks of the hereditary syphilitics or from the offspring of syphilitic parents.

In all cases, careful examination should be made for signs of hereditary syphilis, and this examination should not be limited to the search for "Hutchinson's teeth," cranial nodes, and signs of interstitial keratitis. There are many other signs of syphilitic heredity, as shown by the Fourniers, father and son. These signs include retardation of growth, dentition, speech, and walking (infantilism); malformations of all kinds, including hare-lip, cleft-palate, hydrocephalus and microcephalus, spina-bifida, club-foot, high arching of the palate, cranial deformities and malformations of the ears and eyes; malformations of the heart, genital organs; ichthyosis, etc. In all doubtful cases the therapeutic test should be applied, and a course of mixed treatment with mercury and iodide instituted for some time.

Vagal Attacks.—Gowers (Lancet) uses the term "vagal attacks" as a designation for prolonged seizures, the symptoms of which consist chiefly in disturbance of some of the functions of the pneumogastric, for the most part sensory and subjective. With the vagal symptoms there is often combined a slight mental change and also disturbance of the vasomotor centre causing constriction of the vessels and coldness, especially of the extremities. Associated with the latter may be some sensory impairment and sometimes also a form of slight tetanoid

spasm. When the vasomotor spasm preponderates the case may be termed "vasovagal." The attacks are never really brief; they seldom last less than ten minutes and more often continue for half an hour or more. There is a sudden onset of slight symptoms, rapidly increasing, and the ending is gradual. The seizures recur at varying intervals, often for months or years. Women suffer far more frequently than men, and in most cases the trouble is ascribed to hysteria. The vagal symptoms are referred to the stomach, the lungs, and the heart. There is a sudden sense of oppression in the epigastrium, which is irrespective of the state of the stomach or its functions, and seems to ascend to the chest, but never higher, as is the case in epilepsy. Even more common as an early symptom is a sense of respiratory distress, sometimes amounting to actual orthopnœa. With it may be combined the cardiac symptoms—discomfort, acute pain, often a sensation of sudden stoppage of the heart followed by rapid action. A sense of impending death is often experienced. A peculiar slight mental state is common, generally described as a difficulty or slowness of mental operations, beginning quite suddenly, and striking the patient as quite abnormal. The vasomotor spasm sometimes attains a high degree. There is symmetrical coldness associated with a small pulse. The face is pale and shivering is common, sometimes amounting to a definite rigor. There is often tingling and numbness in the extremities, and sometimes tetanoid spasm. This differs from typical tetany in that the fingers are flexed at all joints. In the treatment of such attacks it is essential to discover any defect in the general health and anything in the conditions of life involving strain on the nervous system, and to put these right as far as possible. Conspicuous anæmia is not often present, but constipation is common and harmful. It is very seldom that any exciting cause for the attacks can be traced, but it is important to avoid all causes of overfatigue. When an epileptic element can be traced, good results follow the use of the bromides. In all cases in which there is vasomotor spasm the regular administration of nitroglycerin is by far the most useful agent. Taken regularly it exerts a permanent steadying effect on the vasomotor centre. Nerve tonics are sometimes useful.

Acute Colitis.—Phillips (British Medical Journal) discusses this subject in an interesting article based on a series of twelve cases of acute and ulcerative colitis. Very acute cases may commence by severe pains in the back or limbs, this may precede other symptoms by two or three days. More commonly the first symptoms indicate some abdominal disorder—acute pain, with diarrhœa or melæna; vomiting is common. Or, finally, the onset may be gradual, and strongly resemble typhoid fever. The tongue, though thickly coated at first, soon clears off and remains clean. The gums may become sore, ulcerated, or spongy, and the breath often has a horribly offensive musk like odor. The appetite and gastric digestion are preserved in a remarkable degree. Vomiting is rarely present, except at the very onset of the disease. While the pains may be quite severe, yet on the whole colitis is not a very painful disease, and very intense, even fatal, ulcerative colitis may be unaccompanied by pain from first to last. Tenderness is usually present over the part of the colon affected, most often the descending colon. The distended outline of the gut is often discernible, but the distention is not usually extreme. Diarrhœa is an early symptom, and the movements are most offensive, containing mucus, blood, and sometimes large sloughs. The circulation and respiration are singularly little affected; the pulse does not quicken, and remains strong, while there is little tendency to congestion of the lungs, etc. There is a great tendency to severe anæmia in protracted cases, due to the melæna. Leucocytosis is so frequently present that it must be regarded as a feature of the disease, most useful in diagnosis. The patient's mental condition is no criterion of the seriousness of his illness. Sleeplessness is often troublesome. Hiccough occurs in the course of ulcerative colitis so frequently that it is almost to be regarded as a symptom of the disease. And its severity, frequency, and persistency constitute it a very dangerous symptom. The temperature is usually raised, though not to a very high range; as a rule, it is of the continuous type, but it may be remittent or intermittent. Rigors may occur without any subsequent indications of local complications. Emaciation and debility are less rapid than might be expected in so grave a disease. Perforation may occur, though, considering the severity of the ulceration, it is remarkably infrequent, partly because the wall of the colon is much thicker than that of the small intestine. Peritonitis does not necessarily result from perforation—indeed, it may occur without any symptom whatever to denote it. There is a marked tendency to embolism in distant organs. The whole course of the disease tends to consist in a series of repeated attacks of inflammation of the colon. But apart from this there is a distinct tendency to relapse. Treatment should be directed to lessening the amount of toxic sub-

stances in the colon. Of all the antiseptics none is so useful in colitis as mercury, blue pill, or calomel. Diarrhœa may be checked by enemata, with or without opium. Opium is the only drug having any influence on hiccough. Nutrition must be most carefully attended to.

Malarial Oedema.—Michailow (Wratschebnaja Gazetta) says a young man 23 years of age was admitted to the hospital with enormous œdematous swellings of the lower and upper extremities, the back, the abdomen, and especially of the eyelids, the lips, and the penis. The lungs and heart presented nothing abnormal; daily quantity of urine, about 1,000 cc.m.; urine transparent, clear, without turbidity; no traces of albumin in the urine; liver not enlarged. Spleen enlarged on percussion, but not palpable. The examination of the blood resulted in the demonstration of the plasmodium malarial within as well as without the cells.

The treatment consisted in a luke-warm tub-bath, with subcutaneous injection of 3,0 antipyrine and quinine sulphate, respectively, in 10,0 distilled water. As soon as the next following day, the œdema was considerably diminished, especially in the face. After the internal administration of 0,6 quinine, the injection was repeated, with the result that the œdema again diminished to a marked extent. On the next following day the various swellings had disappeared. The patient thereafter received quinine exclusively by the mouth. At the end of ten days he was discharged as completely cured. A similar case was observed and treated some time ago by the author in private practice. This patient was a boy, two years of age, whose non-albuminous œdema likewise subsided under the influence of quinine injections.

Pneumonia in Children.—Murray states that in the case of young children suffering from acute disease of the lungs, it is of more importance to keep an accurate record of the respiration rate than of the pulse rate. It is a measure of the defective aeration of the blood, and reminds us that a prolonged and considerable rise in the respiration rate may be followed by a rapidly culminating exhaustion, matters of great importance in prognosis and treatment. In the early stages of acute pneumonia in children, apart from rickets, the extent and duration of the disease are the chief factors in accelerating the rate of breathing. The writer disbelieves in the current classification of pneumonia in children into lobar pneumonia and bronchopneumodia, holding that it is inaccurate and of no clinical utility. The symptoms and signs are so variable and are met with in such different combinations, that classification is almost impossible. To him bronchopneumonia simply means a pneumonia that in spreading seems to follow the distribution of the bronchial tubes, and lobar pneumonia one that spreads in a fairly even advancing line; in this sense only is bronchopneumonia a commoner disease of childhood than lobar pneumonia. Each sign and symptom should be estimated individually as to its influence on prognosis and treatment, rather than all being lumped together in an arbitrary, hypothetical group. From a study of fifty-four cases of acute pneumonia in children, the following was learned: The more definitely localized the pneumonia, the more sudden the onset. Vomiting is the most constant of the early symptoms, while convulsions are extremely rare as an initial symptom. Pain, an important and significant symptom in the adult, is rarely noteworthy in childhood. The feature most difficult to classify was the fever, it being impossible to group the cases into "continuous" and "remittent." Empyema and pericarditis are most exceptional complications in children. Relapses are always due to direct extension either from the original focus or from some other patch of consolidation. The two most important factors in forming a prognosis are age and nutrition. Most of the cases under one year of age die. Rickets is a very serious factor, especially in prolonged cases. The more sudden the onset and the more localized the consolidation, the better are the patient's chances. Because of the importance of wasting and of continued vomiting, special attention should be paid to the diet. The writer does not employ ice bags or venesection. A free supply of fresh air is of prime importance. Drugs have little influence over the course of pneumonia in childhood, except as stimulants to the circulation or respiration.—Brit. Med. Jour.

Surgical After Treatment.—Stevens (Lancet) brings out the following points regarding the after treatment of surgical cases: After an abdominal operation the patient should be propped up a little after two hours. The dorsal position is uncomfortable, is the cause of acute cystitis in women, and there is risk of "acute decubitus." Children should not be strapped down. The right lateral recumbent position is best for natural drainage, and the semi-recumbent bent dorsal position for artificial drainage. Thirst should be quenched by frequently rinsing the mouth with hot or cold water, by giving large saline enemata, or by leaving saline solution in the abdomen. Much of the pain is due to spasm of the abdominal muscles, which can be re-

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lieved by propping the patient up and raising the knees with a pillow. Morphine should not be given, but rather atropine, or sulfonal. Opium masks the symptoms. In most cases rectal feeding is not necessary. Milk should be avoided, as it is hard to digest, and leaves a bulky residue. Beef tea is an over vaunted diet, as it contains only three and a half per cent. of proteins. The best foods are raisin tea, albumin water, and plasmon powder in water, tea, or broth. In some cases a fluid dietary sets up flatulence. A catheter should not be passed until twenty-four hours after the operation. The bowels should be opened on the third day by a simple enema. A little rise in temperature on the first two days is usually reactionary, and means nothing serious. Usually if the pulse keeps below 100 the patient is doing well, and there is no danger of peritonitis. Where artificial drainage has been instituted it should be renewed in forty-eight hours. Three weeks in bed is the usual period of rest after a laparotomy. Sutures should not be removed early unless causing irritation. In case of "stitch abscess" the wound should be cut and left until the wound has been purified, for fear of infecting deeper structures. Surgical shock must be prevented by judicious anteoperative treatment. The patient's system should not be drained of fluid by starvation and purgation. Shock is due to exhaustion and breakdown of the vasomotor centre; the blood collects into the splanchnic area, and the patient bleeds into his own veins. Neurotic shock is seen in persons whose nervous centres are exhausted, secondary shock in debilitated and emaciated people. The treatment of neurotic shock is by morphine. Immediate and secondary shock call for something for the heart to act on—this is furnished by subcutaneous or venous infusion of saline solution. Subcutaneous infusion is safer, but takes longer. Adrenalin is also useful. Meteorism is often preventable by using the flatus tube from the first. Peritonitis requires prompt treatment, such as a high turpentine enema, calomel, and saline purges. If it does not yield, an immediate second operation may be necessary. For persistent vomiting gastric lavage is the best treatment, or twenty grains of bicarbonate of soda in a tumberful of water. For persistent hiccough try tongue traction or pressure on the phrenic nerve. Postoperative hæmatemesis usually occurs within the first forty-eight hours; to prevent it, calcium chloride should be given. Parotitis can be prevented by attention to oval asepsis. Postoperative mania and neurasthenia must be treated symptomatically and tactfully. Where adhesions form the position of the patient should be frequently changed. In hernia cases the bowels should be opened early in order to prevent adhesions. In breast cases leave the arm free and use a many tailed bandage. In gall-bladder cases cellulose wadding is the best absorbent for the bile. Salol or boric acid should be given after operations on the urinary bladder. In knee joint operations do not hesitate to sacrifice a stitch if there is tension. In fracture of the patella never fix the knee joint, but begin passive and active movements very early. Never use strappings in circumcisions; just plenty of boric ointment on lint with cotton wool and a napkin.

Postpartum Haemorrhage.—Postpartum hæmorrhage is defined by LePage (British Medical Journal) as a hæmorrhage which is the result of an atonic state of the uterine muscle, acquired, accidental, or constitutional. The one thing which should be immediately done, the one rational treatment in all cases is to shut off the blood-current along the uterine arteries by compressing the abdominal aorta. The uterus is atonic. Its gaping vessels are, or were, so long as any blood tension remained, pouring out blood. There is marked collapse. The nerve-centers which control uterine contractions, and the higher centers which control cardiac action and respiration, are devitalized. The first indication is to prevent further hæmorrhage. The second is to revitalize the nerve-centers, which can only be done by increasing the volume and current of the blood. The third indication is, having restored blood-tension and nervous energy, to assist, now possible, uterine contraction.

The author's treatment consists of the following steps *seriatim:* The pelvis is raised, to cause the blood to gravitate toward the heart and brain and to prevent bleeding from the ovarian and uterine veins. The abdominal aorta is compressed, to immediately arrest arterial hæmorrhage. Compression is best made against the spinal column beneath and below the umbilicus, with the outer ulnar portion of the left clenched hand. The pressure should at short intervals be made to slide from one part to another of the available three or four inches, to avoid injury to the network of sympathetic nerves around the vessel, and it should be continued until uterine contraction is secured, even if this be delayed for one or two hours. Its release must be very gradual. The arms and legs are raised to transmit their blood into the trunk, and then firmly bandaged to prevent the return of blood when they are lowered. By these means the blood-tension is raised almost to normal in one or two minutes. The

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As a SPray for the Throat.

Dr. C. H. Schiller, Clinic Staff Assistant Obstetrician Dearborn College, Chicago, Ills., writes: "Received your samples in O. K. order, and last Sunday had occasion to use your Campho-Phenique liquid in a throat case. I sprayed it very dilute about three per cent. and with excellent results. I can highly recommend your preparation." Campho-Phenique used as a spray in the throat should be diluted with almond or olive oil and never diluted with any aqueous mixtures.

"There is a curious swelling over the region of the heart, sir, which must be relieved at once," said the doctor with his ear to the patient's chest. Whereupon, says the Indian Medical Record, the patient remarked:

"That swelling is my pocket book. Please don't reduce it too much"

aseptic hand is then carefully passed into the uterus to detect any possible laceration of the body or cervix, any retained portion of placenta, and to afford a *point d'appui* for grasping and compressing the uterus from outside. The bandage must be kept on the limbs a long time and the blood allowed to return into them very slowly. The writer has used this method of treatment in about 5000 parturitions, and has never seen a death from postpartum hæmorrhage.

Portal Cirrhosis of the Liver.—Duckworth (Lancet) states that portal cirrhosis or fibrosis of the liver is the result of alcoholic excess. Alcohol only acts indirectly on the liver by setting up gastroenteritis, which gives rise to specific poisons, which, on reaching the liver, produce the change in the cells and connective tissue. Portal cirrhosis is most frequently met with in middle life, few patients being over fifty years of age. It is a chronic interstitial hepatitis, a monolobular cirrhosis. In the earlier irritative stage, there are dyspepsia, morning vomiting, enlargement of the liver, diarrhœa, and loss of strength. Copious hæmatemesis may occur, leaving profound anæmia, and melæna may occur for a day or two. Subsequent hæmorrhages may prove fatal.

The second stage is established when abdominal dropsy begins. The hepatic condition is but part of a widely spread change in all the tissues of the body. The small capillary enlargements on the skin of the arms, neck, and trunk, the "stigmata" or spider-like angeiomata, are practically peculiar to portal monolobular cirrhosis, especially the alcoholic variety. A general hæmorrhagic condition may be present. Jaundice is not present to any extent. When the liver is contracting and ascites is progressing, the fluid must be removed by tapping, and the earlier this is done the better. Talma's operation to prevent further accumulation of fluid consists in setting up adhesive inflammation between the peritoneal surfaces of the liver and the diaphragm by scraping these surfaces. Another operation is epiplopexy, in which the greater omentum is stitched to the anterior abdominal wall. Either of these operations should be carried out in the early stage of ascites, and then only if the patient is in good condition. The results so far have not been very encouraging. The best remedies are compound jalap powder, and mercury, squill, and digitalis pill.

The Heart in Chronic Pulmonary Tuberculosis.—Ernest Barie (Jour. des Prat.) in considering the variations which the heart undergoes in chronic pulmonary tuberculosis, divides these into two main varieties according to the condition of the lungs, whether of the cavitation form or of the chronic fibrotic form. When the cavitation form of chronic pulmonary tuberculosis is present the heart shows very few abnormal variations; in a large number of cases the size of the organ is about normal, in others its volume and weight are diminished although its shape is natural. In some cases one finds a true atrophy of the heart, in others its walls are remarkably soft and flabby, or its surface is covered with a thick layer of adipose tissue, chiefly at the level of the right ventricle, about the auriculo-ventricular groove, at the apex, and where the large vessels arise from the base of the heart. In rare cases fatty degeneration, and, still rarer, hypertrophic sclerosis of the cardiac muscle have been found. When the lung disease is of the chronic fibroid variety, an increase in the size of the heart is frequently found, if not the rule. The author agrees with the explanation, now generally accepted, that dilatation of the right side of the heart in phthisis is mainly the result of the pulmonary sclerosis, the emphysema, and, in a less degree, to the pleural adhesions and the dilatation of the bronchi. To explain those cases of the cavitation form of phthisis in which the right side of the heart is hypertrophied and dilated, the author advances the following explanations: (1) The lung disease is associated with cardiac disease (valvular disease, pericarditis, adherent pericardium); this association of phthisis and heart disease is far from being rare; the association of phthisis and mitral disease is commoner than phthisis and aortic disease (Gunsberg). (2) In addition to the lung disease there is pulmonary stenosis. (3) The lung disease is complicated with digestive troubles. The author explains the cardiac hypertrophy resulting from irritation of the digestive tract by assuming that irritation of the digestive tract causes reflexly a spasmodic contraction of the vessels in the pulmonary circulation, which secondarily gives rise to hypertrophy and dilatation of the walls of the right side of the heart; in some cases this dilatation may be so marked as to allow of tricuspid regurgitation, which, however, in most cases disappears under suitable treatment for cardiac dilatation.

Total Procidentia in a Girl Aged Sixteen.—Sutter (Monatschr. f Geb. u. Gyn.) reports this condition in a patient whom he examined when she was over eighteen years of age, subject to procidentia complicated by gonorrhoea. Three years previously she had strained herself moving furniture, and noticed a projection in front of the anus. One year later all the parts seemed to come

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out of the vulvar orifice. The prolapse ultimately became irreducible. When examined by Sutter the patient, then in domestic service, was anemic and somewhat emaciated. There were evident signs of chronic gonorrhoea. A mass bearing all the characters of a total procidentia protruded from the vulva; the cervix had become ulcerated, as usual. The round ligaments and ovaries could readily be defined through the prolapsed vaginal walls. The entire mass was easily reduced, but immediately the pressure was removed it descended again, the posterior vaginal wall coming first. The uterus was very small, and there was but little pubic hair. Sutter amputated the hypertrophied portion and performed anierior colporrhaphy, and also shortened the round ligaments to the extent of nearly six inches by Alexander's operation, opening the peritoneum. Yet the posterior wall began to descend a month later, although the patient had been carefully nursed and undergone an operation for strumous cervical glands in the meanwhile. Sutter undertook a posterior colporrhaphy, and strengthened the perineum by a plastic operation. The patient was discharged cured but no after-history is reported.

Sutter refers to O'Callaghan's case, and Mirabeau, in a discussion on Sutter's report, mentioned an operation on a girl between seventeen and eighteen, recently delivered. She had been pregnant, and was employed in a butcher's shop, often lifting heavy pieces of meat. During labor the os presented in front of the prolapsed vagina. Believing that in the course of involution the procidentia might be spontaneously cured, Mirabeau applied a pessary on the seventh day of the puerperium, but it could not be retainep, as there was marked cystocele. He performed a plastic operation to cure the prolapse of the bladder without removing much of the vaginal wall. There was no congenital anomaly in that instance; on the contrary, the patient was strongly and well developed, and the labor had been normal, notwithstanding the prolapse. That condition, in Mirabeau's opinion, was of purely traumatic origin, due in part to lifting heavy weights. Wiener observed that when an assistant in country practice, he saw a good long series of cases of prolapse in girls. The patients were in every instance of the peasant class, accustomed to hard manual labor. He always performed anterior and posterior colporrhaphy, and declared that he had never seen a failure. Stumpf remarked that, as prolapse has been observed in the new-born child, it cer-

tainly might have been of congenital origin in some of the reported cases which occurred in girls.

Fainting—Growers states that our knowledge of faints and fainting is just enough to obscure our ignorance. The most obtrusive features of complete cardiac syncope is the loss of consciousness which results, evidently due to the failure of the action of the heart which precedes and attends it. But as consciousness is not the result of the circulation of the blood, so unconsciousness in not the direct consequence of stoppage of circulation. Its immediate cause must be a state of the nerve elements of the brain due to the change in the circulation. Mere failure of the supply of nutrition furnished the brain by the heart is not an adequate explanation. The renewel of nutrition of the nerve elements, the supply on which their metabolic processes depend, is from the plasma about them, derived from the blood indeed, but for the time extravascular. At any given moment the amount of this must be adequate to maintain the metabolic changes and the function that depends on these for a much longer time than that during which consciousness maintained in syncope. Sudden death in aortic regurgitation is clearly syncopal, but is so immediately synchronous with cardiac failure as to negative any view that it is due to failure of nutrition. Sudden diminution in blood pressure within the cavity of the skull must, however, exert considerable influence. It will be effective in proportion to its suddenness, as are all variations of intracranial pressure. How the alterations in the nerve elements are produced, and the nature of those alterations, is not known. It may be conceived of as a widespread retraction of cortical dendrites, interrupting their connection with all lower centres. It is doubtful whether true cardiac syncope ever causes absolutely sudden loss of consciousness except when this is due to a fatal arrest of the action of the heart. It seldom causes a hurtful fall, the deliberate onset enabling the patient to lie down, when gravitation ceases to hinder the flow of blood to the brain and the blood pressure is restored. When consciousness returns there is correct perception of surroundings from the the first, never the mental confusion and erroneous action common after minor epilepsy. Syncope is often due to a cause which can act only through the nervous system, such as sudden intense pain, the sight of blood, certain odors, etc. Here syncope is probably the result of a profound influence on the sensory regions of the cortex, focused down on the cardiac centre in the medulla. Sudden change of posture is an occasional excitant of loss of consciousness, and if the change is to the erect posture it may be regarded as syncopal. Stooping or lowering the head has the opposite effect on the intracranial circulation, tending to increase the amount of blood in the vessels. Severe paroxysms of coughing may have the same effect.—Lancet,

On the Value of the Tuberculoopsonic Index in Diagnosis.—Fraser (Glasgow Medical Journal) concludes that the tuberculoopsonic index in healthy persons ranges from 0.80 to 1.20, and at present there is no reliable evidence that it ever reaches beyond these limits. The level of the tuberculoopsonic index is not altered, so far as we know, by either of the following factors: (a) Nontuberculous disease (except some instances of pneumonia, diabetes, and whooping cough); (b) hereditary predisposition to tuberculosis. It may vary in cases of tuberculous disease from as low as 0.20 or 0.30 to as high as 2.40 or over. In about 75 per cent. of the cases the index is found above or below the normal limits at a first examination. In the remaining 25 per cent. of the cases a first examination will yield an index within these limits. These facts enable one to state that, when an index of over 1.20 or under 0.80 is recorded in any case, there is a strong probability of the presence of tuberculous infection. For the diagnosis of those cases in which the index is within normal limits, Wright's differential test, applied to the patient's blood serum and to fluid from a pleural effusion, an abscess, etc., may be very useful in those cases where there is the possibility of obtaining fluid from a local focus of infection. The phagocytic test with heated serum may prove to be of value in those cases of tuberculosis where autoinoculations have taken place, and where the opsonic index (which is fluctuating) has been found within the normal limits at the first examination. There still remains, however, a considerable number of cases in wyich the opsonic index fails to give conclusive evidence of the presence of tuberculous infection. In these a definite diagnosis may be arrived at by the estimation of the patient's opsonic index before and after the inoculation of a small dose of tuberculin. This inoculation causes very little inconvenience to the patient, and is followed by no ill effects. An examination of the tuberculoopsonic index, therefore, may be made the ultimate appeal in all cases where a diagnosis of the presence or absence of tuberculous infection is required.

Evidence Founded On Facts

The increasing disposition on the part of the medical profession to acquire an intimate acquaintance with the exact composition of Ethical pharmaceutical preparations has inspired the presentation of this analysis;

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Prof. of Pharm., George Washington University, Says:

Herewith I submit a report of the chemical examination made by me of a medicinal compound known to be Tyree's Antiseptic Powder. The analysis disclosed the following facts: Its ingredients are of U. S. P. standard of purity. Its chemical adjustment is exceptionally well balanced. In dry form it contains zinc sulphate, which upon the addition of an aqueous solvent, is converted into zinc sulphocarbolate [zinc phenolsulphonate]. The percentage of antiseptic—salicylic acid, carbolic acid, menthol, thymol and eucalyptol—is uniform. The finished product appears in a state of extreme fineness. Each of the constituents fully meets the requirements of the U. S. Pharmacopeia. This fact was determined by an independent test of each one of the several ingredients. It would be difficult to prepare this compound extemporaneously. The admirable adjustment is shown by the following test.

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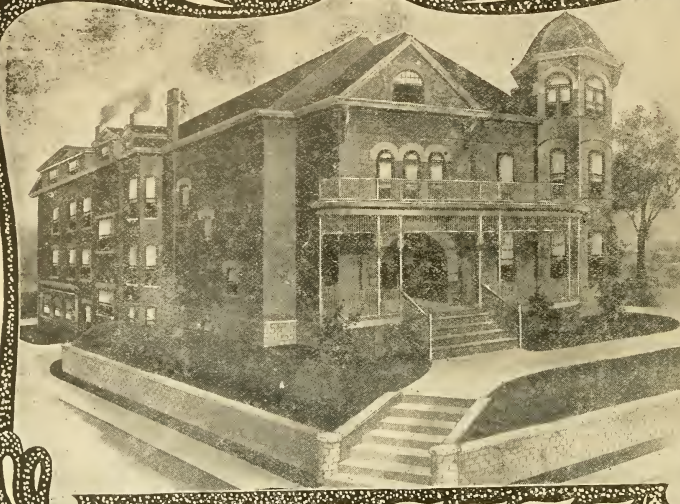
Tables of this analysis of **TYREE'S ANTISEPTIC POWDER** with clinical comments and a sample of the product supplied the profession upon application to

J. S. TYREE, = CHEMIST - Washington, D. C.

Relation of Diet to Thyroid Activity.—Fordyce (British Medical Journal) describes the experiments he has performed in feeding rats on milk alone and on bread and milk, and comparing the thyroids removed from these two series of animals with those of wild rats. He found that the glands of all animals fed on bread and milk showed a constant picture, while those from the wild rats (caught at the same time and place), though showing somewhat wider variations, yet in all cases displayed in a greater or less degree the same nature of differences from both the preceding types of gland. In the milk-fed rat gland-sections showed large vesicles, well filled with colloid material, while the lining cells were small, with deeply-stained nuclei. In the bread-and-milk-fed rats the vesicles were seen to be very markedly smaller and the amount of colloid present very considerably less. Whereas, in the case of milk-fed rats each vesicle consisted of a large lumen surrounded by a narrow ring of somewhat flattened cells, here it consisted of a ring apparently almost in contact. Examination of the glands of wild rats showed them to be of a more or less intermediate nature between those of milk-fed and those of bread-and-milk-fed animals. Compared with sections from bread-and-milk-fed animals, the vesicles appeared distinctly larger, they contained considerably more colloid material, and the lining cells showed a greater variation in shape. These glands, one and all, it must be remembered, were removed from animals clinically in perfect health; and, while the thyroid gland is an organ well known to be subject to considerable variations in structure, yet the interest in the present note rests in the fact that the variations in the series of glands examined corresponded with the differences in diet.

A Davenport, Iowa, thief, says the Medical Journal, formed a passing attachment for a diamond ring that did not belong to him, and when he was surprised by the owner promptly swallowed it. The thief denied all knowledge of the missing stone but an X-ray picture showed where the diamond was inside.

In the State of the German Empire, says the Medical Record. there is a tariff regulating the charges to be made by physicians, giving a high and a low mark, To this has been added lately the following remark, "Physician's advice by telephone is to be charged as a visit to the office."



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Miscellaneous.

Annual Report of the Secretary of the North Carolina Board of Health, May 1, 1906—May 1, 1907.

During the past year we have suffered no special outbreak of disease and the health of our people in general has been about as usual. A detailed statement of the work of the Board will be found in the Eleventh Biennial Report, which has been for months and still is in the hands of the printer. A copy will be sent to any one asking for it as soon as it is possible.

The work of your secretary has been, for the most part, of the usual routine character, special attention having been paid to the further distribution of the pamphlet on the prevention of tuberculosis. The indications are that the wide circulation of this little pamphlet has made an impression upon our people and has been of real assistance in the campaign against this most fatal of all our diseases. I am satisfied that the plan adopted of sending the pamphlet direct to the individual, with a letter urging him to read it and to assist in its distribution, has added much to its effectiveness. Over 100,000 have been mailed to date and I am confident that no expenditure of our meagre appropriation has brought forth better results than that paid out for the postage on this pamphlet.

With January came the meeting of the General Assembly, which is always a period of mingled hopefulness and anxiety. While the attitude of the last Legislature was, perhaps, less friendly to our license law than has been the case for many sessions its interest in the public health was more pronounced than usual—an interest that was not simply academic, but one that did something worth while. In the Bulletin for April I printed all the acts of general interest bearing on the public health directly or indirectly through our medical license law, but it may not be amiss to refer again in this place to the more important.

The act creating the State Laboratory of Hygiene, which carried no annual appropriation from the general fund for its support, was so amended as to give it two thousand dollars annually, at the same time increasing the annual tax of sixty dollars upon water companies by four dollars. This latter does not materially increase the income of the laboratory, but all the companies would not pay expressage on water samples and the four dollars was added to cover that. With the tax from the water companies, now numbering fifty-one and gradually increasing year by year, the income will be sufficient, with the money on hand, to adequately equip and conduct an excellent laboratory without outside help. In this connection it is proper to call attention again to the fact that without the generous aid given us by the State Board of Agriculture, we, in all probability, would not have had any laboratory at all. It should be remembered that at first the Board of Agriculture had biological analyses of drinking water made for us in their laboratoro free of charge, until the water tax was obtained four years ago, and that since that time it has, in addition to furnishing the laboratory with gas and water, paid seven hundred and fifty dollars a year towards the salary of the Director. I hope suitable acknowledgement of the enlightened liberality of the Board will be made by the conjoint session. The report of the Director for the past year is appended.

In order to extend the benefits of the laboratory as far as possible to the people an act was passed authorizing the preventive treatment of rabies by the Director, who, in the reorganization, will doubtless be a thoroughly trained medical man, when it can be done without interfering with the legitimate work of the laboratory proper.

A decided advance in State medicine was marked by the enactment of a bill establishing a sanatorium for tuberculous patients, appropriating fifteen thousand dollars for a plant and five thousand dollars annually for support. The chief credit for this particular legislation is due to Dr. J. E. Brooks, of Greensboro, who was "the man behind the gun," and the Hon. J. R. Gordon, M. D., member from Guilford of the House of Representatives, who was mainly instrumental in securing its passage.

Acknowledgement of this was made by the Board of Health, of which the Secretary of the Board of Health is, *ex-officio*, a member, at their first meeting, in the election of Dr. Gordon chairman of the Board and Dr. Brooks superintendent of the Sanatorium. While the appropriation is very small it will provide for a beginning, and as the superintendent is not only an intelligent and capable physician, but an enthusiast on the subject, I feel confident that it will succeed.

As the competency of our physicians is of the highest importance to the public health anything bearing upon our medical license law is of interest to us. During the session of the legislature bills for the relief of physicians in Cherokee, Clay and Graham counties and in Chatham county were enacted into law. In the one case physicians having diplomas were allowed to practice until May 1, 1909, and in the other simply to stand the examination for license without exhibiting a diploma. The reasons given for this legislation was the same in

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both cases—that in the remote, sparsely settled and physically rough regions physicians so well educated as to meet the requirements of our very high standard had not settled and that unless such action was taken the people in the affected localities would be without medical aid. While actively opposing the first named bill, for fear that it might be an entering wedge threatening the integrity of our license law, I could not deny the facts, nor in my own mind deny the inherent reasonableness of the contention in the light of those facts. It was indeed the realization of what we have been anticipating, and I was thoroughly impressed with the importance of devising some method of practically lowering the standard to meet such conditions, lest our license law should be emasculated in the near future. As a means to this end I approved, as chairman of the Society's Committee on Legislation, the passage of a bill authorizing the Board of Medical Examiners to reciprocate with other States *in their discretion*. I welcomed this bill the more gladly because it enabled me to secure the voluntary suppression by its author of another bill requiring the Board of Examiners to grant a license to any one presenting a diploma from a member of the American Association of Medical Colleges and a license from *any* State. As the standard of some States is extremely low and in nearly all lower than our own the passage of this bill would have practically repealed our license law and have undone the work of fifty years for the elevation of our profession and the protection of the people against incompetent physicians. Before the present meeting of the Board of Examiners I addressed a circular letter to each member of the same calling their attention to the condition above set forth and to the importance of action on their part to meet them as far as possible, suggesting reciprocation with the low standard States where the conditions for this concession demanded it and also that it would probably be well to lessen the rigor of the examination somewhat, by granting certificates on the branches passed and thereby encourage men to come again a second time and finish up successfully rather than give up in despair and take the chances of practicing illegally. I was, therefore, much gratified to learn from President Kent, who stopped over in Raleigh on his way to the meeting for the purpose, that he had secured from the Assistant Attorney General an opinion to the effect that it would be legal for his Board to grant a license and require the recipient to sign a contract to restrict his practice to a certain county, or section,

the Assistant Attorney General writing out the form of said contract. The judicious use of this privilege will, I think, solve the problem.

Smallpox.

I am glad to state that smallpox has been very much less prevalent. In 1905 the total number of cases was 7375 with 31 deaths, in 1906, 6049 cases and 17 deaths, while during the year ending May 1, 1907, the total number of cases was only 1900 with 6 deaths. The following is a tabulated statement of the disease by counties:

SMALLPOX REPORT FROM MAY 1, 1906, TO MAY 1, 1907.

County	Number of Cases.			Number of Deaths.		
	White	Colored	Total	White	Colored	Total
Alamance		74	74			
Anson	10	10	20			
Ashe						
Bertie	5	11	16			
Bladen*	12	3	15			
Brunswick*	5	30	35		2	2
Cabarrus	1	6	7			
Carteret	2		2			
Catawba	1		1			
Chatham	12	15	27			
Cherokee	2	1	3			
Chowan*	100	200	300			
Cleveland	4		4			
Columbus	1	1	2			
Cumberland	19	4	23			
Currituck	22	7	29			
Davidson	6		6			
Duplin			12			
Durham	64	50	114			
Forsyth	24		24			
Franklin*	9	91	100			
Gaston	10	4	14			
Granville	2	5	7			
Guilford	5	94	99			
Halifax	2	1	3			
Harnett	18	4	22	1		1
Hertford	15	30	45		1	1
Lincoln	17		17	1		1
Martin	20	100	120			
Mecklenburg	4	4	8			
Moore	4	23	27			
Nash	10		10			
New Hanover		1	1			
Northampton		3	3			
Orange	25		25			
Person		1	1			
Pitt	13		13			
Randolph	26	65	91			
Richmond*	7	6	13			
Robeson	10		10			
Rowan	3	2	5			
Rutherford	4		4			
Vance	8	5	13			
Wake	67	272	339			
Warren	4	2	6			
Washington*	8	20	28			
Wayne		190	190		1	1
	765	1335	1900	2	4	6
				,0026	.0029	.0031

*Estimated.

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J. R. Rathmell, M. D., Dean,
CHATTANOOGA, TENN.

Officers as follows were elected at the meeting of the Southern Railway Surgeon's Association, held in Washington, D. C., on May 30:

President, Dr. H. T. A. Lemon, of Washington.

Vice-Presidents, Dr. C. H. Starkel and Dr. T. J. Happel.

Secretary and Treasurer, Dr. J. U. Ray, re-elected.

The next meeting will be held at Birmingham, Ala.

At the meeting of the Upper Cumberland (Tenn.) Medical Association, held in Carthage on May 30, officers as follows were elected for the ensuing year:

President, Dr. Sam Denton, of Buffalo Valley.

Vice-President, Dr. J. Howard King, of Chestnut Mound.

Secretary, Dr. L. D. Cotton, of White county.

The next meeting will be held at Sparta.

The following officers were elected at the meeting of the Arkansas State Medical Association held in Little Rock on May 17:

President, Dr. C. C. Stephenson, of Little Rock.

Vice-Presidents, Dr. H. Fink, of Helena, Dr. J. L. Butler, of Sheridan, and Dr. C. B. Stevens, of Magnolia.

Secretary, Dr. Morgan Smith, of Little Rock.

Treasurer, Dr. J. W. Scales, of Pine Bluff.

The West Tennessee Medical Association at its meeting held in Jackson on May 17, elected the following as officers:

President, Dr. H. Hawkins, of Jackson.

Vice-President, Dr. F. D. Smith, of Memphis.

Secretary and Treasurer, Dr. A. I. McSwain, of Paris.

Bromide Treatment.

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Digestive Secretions.

The stimulation of the secretory glands produced by the action of Seng is a most excellent method to re-start the process of digestion.

In those run down and emaciated patients, and after long lingering diseases, Seng will prove most serviceable in building up a normal digestion. It can also be advantageously used as a vehicle in general treatment when a digestive secernent seems desirable and indicated. The good results following this form of treatment has been very favorably mentioned by many practitioners.

Scopolamine not Hyoscine!—A Caution!

In the Archiv fuer Gynaekologie Steffen gives some interesting details as to the use of scopolamine-morphine by Leopold. The latter has employed this method in three hundred labor cases. His verdict is that the method does not accomplish the desired results, it cannot be regarded as harmless for mother and child, and in private practice the by-effects liable to develop may render medical aid requisite at any moment. When men come to conclusions so opposite as those of Leopold and those reported by Gauss, we, to whom each observer is equally trustworthy and free from bias, can only attribute the diversity to a difference in technic. That this is so may be seen by Gauss' examination of Hocheisen's method. Gauss secured a specimen of the solutions employed by Hocheisen and tried them in ten cases, the results being far worse than those reported by Hocheisen. Every objection raised by Leopold has been examined and disproved by Gauss in his much larger experience. Weakness of the labor pains did not occur to any material extent, more frequently or more markedly than in cases where this anesthetic was not used, nor were version and forceps required with greater frequency. The vomiting could only have been accidental, since it did not occur in Gauss' cases, excepting when it had commenced before the anesthetic was given. So also as to the perils of the child; Gauss showed that the mortalities of both mother and child were much less than they had been before this anesthetic was employed.

The extract, as presented in The Journal of the American Medical Association, gives palpable evidence of anxiety to make out a case against this anesthetic method. Even Gauss is made to rank as an objector to the method, by quoting eight troublesome cases which occurred, out of his one thousand; just as if such things never happened unless scopolamine was employed. To any one who wants the whole truth, and not a garbled *ex parte* statement, we refer to Gauss' statistics as given by Holt, in the May number of The American Journal of Clinical Medicine. But even were the account given a fair one, the reader will note that it nevertheless relates to the use of scopolamine, which, as commercially presented, *is not the same thing as the hyoscine used in America.* It is much as if men should insist that, because Germans injure themselves drinking

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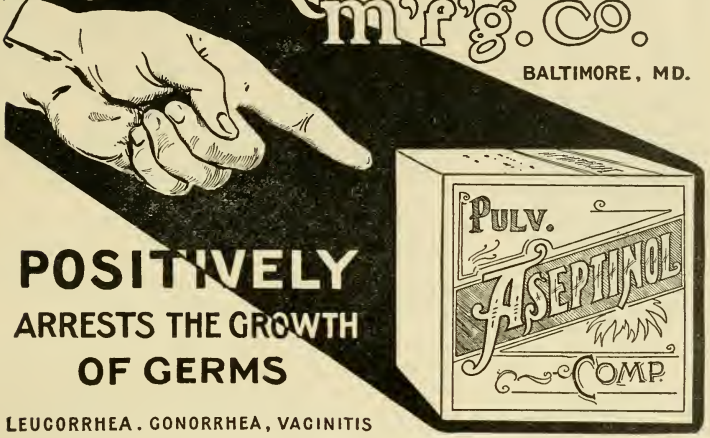

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ARRESTS THE GROWTH
OF GERMS

LEUCORRHEA. GONORRHEA, VAGINITIS
LIBERAL SAMPLE TO PHYSICIANS AND NURSES.

too much beer, we in America should abstain from coffee.

The above being the gist of our knowledge of this subject to date, and the therapeutic difference between hyoscine, a true alkaloid, and scopolamine (or so-called hyoscine from scopola—a serious error of nomenclature) a mixed, uncertain product, being well established in favor of hyoscine, we caution our readers who are interested (and all should be) to use only H-M-C Abbott (hyoscine, morphine and cactin comp.), the original American product and one which, like all the Abbott line, may be depended upon.—The American Journal of Clinical Medicine.

What Is the Moral of this Incident?

Dr. X enjoys the largest general practice uptown. His large automobile is always on the go. He paid me a visit this afternoon. He was in the neighborhood, he said, and he thought he would drop in and make the acquaintance of the editor of the "brightest and most interesting medical journal published." He evinced some interest in the environment of the C. and G. office. He noticed a large number—over two hundred—of different journals of the current year, neatly arranged in piles. "You read all of them?" "Yes." "Where do you get the time?" "You can get the time for anything, if you really want to." "Well, I can't. All I read is the J. A. M. A. and the Critic and Guide. I think they are the best journals published. And you and Dr. Simmons deserve a great deal of credit for the work you are doing with refer-

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ence to patent medicines and proprietary nostrums. Great work. Time the physician's eyes were opened." Here he coughed and continued: "Would you please let me have a swallow of water. I have a little cold." The office boy brought a glass of water. Dr. X took out a tablet from a box in his vest-pocket and swallowed it, washing it down with the water. The tablet was an antikamnia and codeine tablet.

I said nothing.

A life subscription to the reader who will point out the best moral of this incident.—From the Critic and Guide, May, 1907.

THE MORAL.

On page 8 of the January, 1907, Critic and Guide, appears the following editorial with which, no doubt, Dr. X fully agrees:

"When a patient comes to consult me and pays me a fee, then my sole sacred duty is towards that patient and towards nobody else. And I am going to use on him and prescribe for him whatever I consider most useful for him, regardless of all other considerations. Whether the preparation is trake-marked or not, whether it has a fanciful name or not, whether it has a circular around the bottle or not, whether the druggist makes 50 or only 5 per cent. profit on it—for all of these things the patient does not care a picayune; and neither do I."

Plans on a large scale have already been formulated for the International Congress on Tuberculosis to be held in Washington, D. C., during the last ten days of September and the first ten days of October, 1908. In addition to the scientific conventions it is expected to have a very extensive and complete tuberculosis exhibition, with exhibits from a great number of different countries. The attendance of foreign delegates is likely to be a large one, and thirty public lectures by visiting scientists have been arranged for. The congress is to be held under the auspices of the National Association for the Study and Prevention of Tuberculosis, and the committee engaged in the work of organization at present includes Dr. Lawrence Flick of Philadelphia, Dr. Vincent Y. Bowditch of Boston, Dr. Alfred Meyer of New York, Dr. J. J. Walsh of Philadelphia, Dr. Lawrence Litchfield of Pittsburg, and Dr. Charles J. Hatfield of Philadelphia. The committee has appointed a Secretary-General, Dr. John S. Fulton of Baltimore, who has opened an office in the Colorado Building, in Washington, and will devote all his time to the organization of the Congress. The sum of $100,000 has already been pledged to defray expenses.

The Confederation of State Medical Examining and Reciprocating Boards met at the Auditorium Hotel, Chicago, April 30. At the meeting a definite step was taken towards the eliminating of undesirable medical colleges which issue diplomas to incompetent and ignorant medical students. A committee was appointed by the Confederation to investigate that class of medical colleges throughout the country and report as to their qualifications to carry out the work for which they were established. Accordingly President Spurgeon appointed the following committee: Drs. W. A. Spurgeon, Indiana; B. D. Harison, Michigan; B. F. Bailey, Nebraska; J. B. Stephens, Wisconsin; and A. H. Hamel, Missouri.

The State Tuberculosis Commission has purchased a farm of 800 acres in Moore county, on which the State Tuberculosis Hospital, authorized at the recent session of the legislature, will be located.

At a meeting of the physicians of the ten counties composing the sixth councilor district the Sixth District Medical Association was organized at Durham, April 27, with Dr. Augustus W. Knox, Raleigh, as President, and Dr. Joseph Graham, Durham, Secretary.

The State Hospital Commission has decided to proceed at once with the erection of suitable buildings at Raleigh for the care of white epileptics and also to erect a building at Goldsboro for the accommodation of colored epileptics. Dr. James W. McNeill, Hope Mills, of the commission, and the Superintendents of the three State Hospitals for the Insane, were designated as a committee to visit the various hospitals for epileptics in other States, and report regarding the same before proceeding with the erection.

At the semi-annual meeting of the Medical Society of Northern Virginia, held in Alexandria, May 23, the following officesr were elected: President, Dr. Tunis C. Quick, Falls Church; Vice-Presidents, Drs. George Tully Vaughn, Washington, and Frederick M. Brooks, Swetnam, and Secretary Dr. Avery A. Rittenour, Alexandria. The next meeting will be held November 15 at Warrenton.

The West Tennessee Medical Association held its annual meeting at Jackson, May 16 and 17. The following officers were elected: President, Dr. Herman Hawkins, Jackson; Vice-President, Dr. John T. Allen, Brownsville, and Secretary-Treasurer, Dr. Isaac A. McSwain, Paris.

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Prepared only by

Charles Marchand

Chemist and Graduate of the "Ecole Centrale des Arts et Manufactures de Paris" (France)

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The twenty-sixth annual meeting of the Middle Tennessee Medical Association was held at Murfreesboro, May 16 and 17. Dr. Richard Douglas, Nashville, was elected president; Dr. Enoch H. Jones, Murfreesboro, vice-president, and Dr. William Litterer, Nashville, secretary-treasurer. The society will hold its next meeting in November at Nashville.

Frank G. Ryan Elected President of Parke, Davis & Co.

The presidency of Parke, Davis & Co., left vacant by the death of Theodore D. Buhl, has been filled by the advancement of Vice-President and Secretary Frank G. Ryan—an announcement which will be greeted with pleasure by Mr. Ryan's numerous friends throughout the country.

Mr. Ryan was so ideally equipped for this great position that he began to march towards it with what is now seen to have been almost predestination, as soon as he joined fortunes with the house seven years ago. He left the faculty of the Philadelphia College of Pharmacy in the spring of 1900 to become Chief Pharmacist of Parke, Davis & Co. At the end of three years he had made himself so valuable in the councils of the house that he was elected to membership on the Board of Directors. A year and a half later he was given the important post of secretary. Six months later still he was elevated to the vice-presidency. And now, after barely another year, he is given

MR. FRANK G. RYAN,
Elected president of Parke, Davis & Co., just after returning from a trip around the world.

the very highest position within the gift of the house, and, one might say without fear of contradiction, the greatest and the most responsible position yet created in the drug trade of the country.

Born in 1861 in Marcellus Falls, New York, Mr. Ryan was educated in the public schools of Elmira, and then spent three years in the well-known pharmacy of Brown & Dawson in Syracuse. In 1882 he entered the Philadelphia College of Pharmacy and was graduated two years later at the age of 23. Two or three years were next spent in various Philadelphia stores, and then he was made assistant professor of pharmacy in his alma mater. In 1898 he was given charge of the course in commercial training then established in the P. C. P., and in the meantime he had been made lecturer on pharmacy in the Woman's Medical College of Philadelphia. In June, 1900, Professor Ryan resigned all his connections in Philadelphia and went into the house of Parke, Davis & Co.

The secret of a man's success is never easily analyzed, but it may be said of Frank G. Ryan that he represents that rare, that ideal combination of technical knowledge and experience on the one hand, and business grasp and executive ability on the other. These qualities are all but incompatible, and he who unites them successfully has discovered a philosopher's stone. As president of Parke, Davis & Co., Mr. Ryan will be capable of understanding thoroughly every scientific detail of the vast business now confided to his care, and he will also exhibit that larger vision and that greater capacity for administration which will carry the house forward to conquests even more brilliant than those which have been registered in the past.

Mr. Ryan, accompanied by his daughter Helen, had returned from a seven months' trip around the world only a week or two before his election to the presidency. His main object was to further the interests of his house in Japan, China, and India, but he also visited Manila, Ceylon, Egypt, Paris, and London. In Manila an agency was established, which adds another to the considerable list of foreign branches now conducted by the house. In London, on his way back, Mr. Ryan was the guest of honor at two banquets attended by men prominent in British pharmacy and medicine, and when he landed in New York he was greeted at a large reception held at the house of Dr. Jokichi Takamine.

The Atlanta School of Medicine seems to have surprised even its best friends in the hearty reception it has received. Upon its organization two years ago, it promised the profession to set aside certain drawbacks to medical education in the South, and if one can judge from reports it has done much in this direction. Its efforts to establish actual bedside teaching in its own hospital will, we believe, meet with a hearty response from the physicians of the South.

Some Useful Suggestions.

In urinary incontinence, especially in children, give atropine gr. 1-500 t. i. d. and an extra granule at bed time.

In urinary incontinence due to general weakness, especially of the sphincters, add strychnine nitrate, gr. 1-134 to each dose.

In urinary incontinence due to irritation of bladder from foul urine add lithium benzoate, gr. 1 to each dose.

In urinary incontinence from cystitis, add a granule each of aconitine (gr. 1-134) and cannabin to each dose.

Atropine, gr. 1-500 to 1-250 every fifteen minutes is useful in hemorrhage from any part of the body. Hydrastinine, gr. 1-12 should be added to atropine if the bleeding is from uterine membranes. This combination effective.

Atropine, gr. 1-250 till dryness of mouth is noticed, is efficacious in ovarian neuralgia, dysmenorrhoea, etc. Dioscorein, gr. 1/6, should be added to relieve the severer pains.

In excessive sweating, especially at night, pulse slow and soft, skin cold and clammy, atropine, gr. 1-250, every half hour will soon change conditions.

In acute coryza, beginning of congestion, give atropine, gr. 1-500, every half hour until dryness of the throat is noticed, then less often. Hamamelin, gr. 1/6, should be added to atropine if bleeding from veins is due to a general relaxation of their walls.

I gave dioscorein, gr. 1/6, in hot water every ten minutes, in severe gallstone colic, and sodium succinate ever since for last six months with but one slight return of pain. Podophyllin and saline to keep bowels in normal condition completed the treatment. —M. B. Stine, Crooks, S. D.—*From the American Journal of Clinical Medicine, February, 1907.*

Pepsin is undoubtedly one of the most valuable digestive agents of our Materia Medica, *provided a good article is used.* Robinson's Lime Juice and Pepsin, (see page xviii this number) we can recommend as possessing merit of high order.

The fact that the manufacturers of this palatable preparation use the purest and best Pepsin, and that every lot made by them is carefully *tested*, before offering for sale, is a guarantee to the physician that

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Dr. A. U. Williams, Hot Springs, Ark.

I have used GERMILETUM in many cases of rhinitis with most excellent results. It is also the most efficient remedy in catarrhal affections

Dr. E. W. Watkins, Washington, D. C.

I have used GERMILETUM in the most aggravated cases of catarrh and have cured some of the worst cases. I consider it as near a specific in catarrhal affections as can be.

Dr. A. Jordan, Nashland, Tex.

Nasal catarrh, which has long been an odium of medicine, may now be successfully combated by the alkaline antiseptic—GERMILETUM.

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he will certainly obtain the good results he expects from Pepsin.

The Italian government supplies quinine practically at cost to all consumers, and it can be obtained at all the postoffices throughout the kingdom. The amount thus sold last year was 18,712 kilograms, nearly 40,000 pounds. The net profit amounted to 293,295 lire, nearly $60,000. This sum has been set aside to promote malaria prophylaxis in Italy and to give prizes to proprietors who take pains to protect their workmen against malaria. Five such prizes were awarded last year, each of $100, and $6,000 was given to the Italian Red Cross for the anti-malaria campaign this year.

Bubonic Plague.

Despite the strenuous efforts on the part of the Indian government to stamp out the disease the plague still continues to ravage the country, as it has done now for over ten years. The total deaths for the period from October, 1896, to December, 1906, number 4,411,704. It has been established that practically the only disseminators of the plague are the rats and rat fleas. The natives, unfortunately, instead of co-operating with the authorities in trying to exterminate the rats, feed the rodents and allow them to propagate freely. The native population is also opposed to inoculation—the only safe protection against the ravages of the disease.

Stegomyia Calopus.

The Bureau of Entomology of the Department of Agriculture and the Public Health Reports have adopted the name Stegomyia calopus (Meigu, 1818; Blanchard, 1905) for the yellow fever mosquito. As pointed out in Public Health Reports for April 5th, this change is made in accordance with the rules of the International Commission of Zoological Nomenclature, of which Professor R. Blanchard is president. The name *Culex fasciatus* was first used in 1789, and later in 1804, for a mosquito which is not identical with the yellow fever mosquito. *Culex calopus* is the name first properly used for the yellow fever mosquito, and this, upon transfer to the genus stegomyia, becomes *Stegomyia calopus*.—Medical Record.

Motility and Agglutination of the Spirochaeta Pallida.—Zabolotni and Maslakovtz (Roussky Vratch) contribute some experimental data which they think has an important bearing upon the microbic character and specific nature of the spirochæta

of syphilis. They succeeded in obtaining spirochætae from patients in considerable quantities, thanks to an improved method, which involved the employment of Bier's suction apparatus. The Bier's suction pump or balloon was applied to the surface of chancres or papules. The result was that a very large number of live spirochætæ were obtained. At first the spirochætæ execute very lively and characteristic motions, turning about their axis and twisting like snakes. These motions can be most easily noticed by observing the highly refractive points (Centrozomes, nuclei?) in the organisms. When artificial light is used with an apochromat objective of 2 millimetres and a compensating ocular No. 12, these bright points are noted in the actively moving spirochætæ. Some still imperfect observations seem to point to the fact that the spirochætæ are formed in the same manner as the flagellæ of malarial organism or as the spermatozoa in coccidia. By adding physiological salt solution to the material, the spirochætæ may be kept alive in hanging drops for from a few days to a week. The agglutination of spirochætæ has been noted by the authors upon the addition of the serum of persons who have for a long time been suffering from syphilis. The spirochætæ become crowded together and fused with their ends into starlike groups and figures. Then they become more closely packed and twisted into balls, the outer organism still preserving their motility, which gradually becomes looser. Complete agglutination is noted within three or four hours. At this point the balls of spirochætæ reach a considerable size, and if the preparation be then stained the agglutinated germ may be seen in their fixed position, showing undoubtedly that we have to deal with a specific agglutination reaction. If the spirochætæ are allowed to remain in contact with the agglutinating serum they are subjected to marked changes. They are broken up into small fragments and stained but very faintly. The agglutinated masses become fragmented.

Alimentary Intoxication in Infants.—Finkelstein (Jahrb. f. Kinderheilkunde) relates his experiences in years of research on this subject, with special regard to the collapse, disturbances in consciousness, peculiar change in the rhythm of respiration, alimentary glycosuria, fever, diarrhoea, albumin and tube casts in the urine, abrupt decline in weight and leucocytosis. The presence of these nine factors in the clinical picture is indispensable for the conception of what he entitles "alimentary" intoxication. The leucocytosis approaches but seldom reaches 30,000. The respiration is deeper and faster, and the gestures, instead of the "angular," rapid movements of health, become rare, languid and "rounded"; the corners of the mouth are drawn down; the arms and legs take unusual positions, sometimes stretched out, sometimes drawn up, relaxed or rigid. The lower blood pressure brings a livid tone to the complexion, with shadows around the eyes. It is important to see the child at rest to detect this intoxication in its incipiency; when the child is aroused these signs alter. The stools may be approximately normal even with these symptoms of serious intoxication. The sugar in the urine and the deep breathing differentiate this intoxication from the numerous infectious diseases which may be accompanied by some of the other signs. He suggests that these two signs may also prove useful for differentiating in adults brain affections from disturbances due to autointoxication, such as acetonemia and dyspeptic coma. In infants the appearance of the pathognomonic symptom-complex is an indication that a new specific process is going on in the organism. It is liable to be followed by specific, profound modifications of the metabolism. All the functions suffer, as he relates in detail. The intoxication is the expression of a regular reaction of the organism which always occurs when injury from any cause, such as an infectious affection or process or any deleterious influence, reaches a certain intensity. The intoxication is not the work of bacterial toxins, but of metabolic toxins; a sharp distinction should be made between them in this respect. Research is needed on the nature of the substances inducing the intoxication. The conditions are somewhat similar to those observed in uremia.

Uncinariasis.—Adams (Arch. of Pediat.) reports a case of hookworm disease in a white boy, aged 12 years, a native of Maryland. The early symptoms were tiredness, sleepiness during the day, and disinclination for games. Soon he developed almost continuous headache and great muscular weakness. His skin became of peculiar yellow tint. In four to five months he was too weak to walk, and the anemia was profound; red cells, 1,500,000, white, 5,600; hæmoglobin, 20 per cent. Thousands of the ova of the Uncinaria americana (ankylostoma) were found in the stools. Some contained segmenting ova and others young embryos. He was given a light supper and a tablespoonful of Epsom salts at bedtime, a similar dose of salts at seven next morning, and 10 grains of thymol in an hour's time. Two more doses of the thymol were given after intervals of an hour and a half and another dose of salts after the last. Food was withheld until five in the after-

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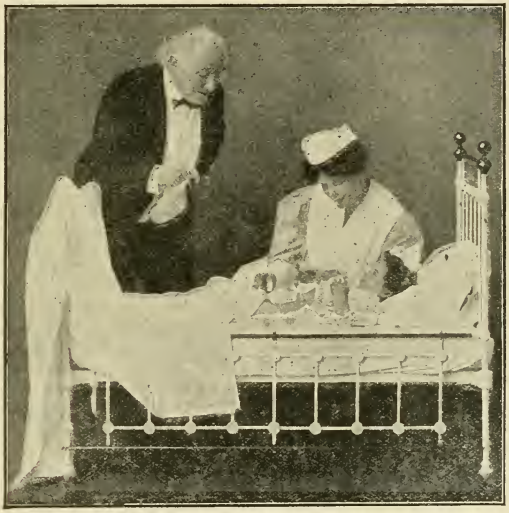

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noon. The treatment was repeated three times after intervals of seven to eleven days. Iron and manganese were also given. The treatment was repeated three weeks later, and after that he was discharged cured. A distinct uncinaria was proved to infest man in America in 1902, being endemic in the Southern States. Cases have been ascribed erroneously to malaria and to dirt-eating. The worms are about half an inch long. They live in the small intestine. Ova escape in the feces and hatch in about twenty-four hours. Infection takes place by the mouth, by drinking-water, food, or soiled hands. Cases vary much in severity. Ova are found in the stools in four to ten weeks after infection. Local indefinite symptoms are followed by anemia and, in bad cases, by dropsy. Even after isolation from source of infection the disease may persist for six or seven years. The diagnosis depends on the presence of ova and perhaps blood in the stools. Prognosis is good if treatment is adopted reasonably early.

Tests for Acetone in the Urine.—Jackson Taylor, in the London Lancet, says with reference to the sodium-nitroprusside test, which consists in the darkening which takes place on the addition of acetic acid to a solution of sodium-nitroprusside, urine, and liquor potassæ, that the test is rendered more simple, delicate, and accurate by a slight modification—namely, the substitution of strong ammonia for the liquor potassæ and the elimination of the use of acetic acid. In the ordinary test when the solution of potash is employed there is a uniform reddening of the whole solution which on the addition of acetic acid in the presence of acetone becomes darker when the acid comes in contact with the urine, the darkening passing down as the acid sinks. Therefore, with this test the addition of liquor potassæ to the urine and sodium-nitroprusside yields a red coloration whether acetone is present or not, and it is only after the final addition of acetic acid that the presence of acetone is recognized and then only when there is a fair amount of the latter present. The detection of the presence of acetone is therefore dependent on the darkening of an already darkish red fluid by the final reagent, acetic acid, and the degree of darkening, when acetone is present only in small quantities, is not altogether easy to determine. If, however, strong ammonia replaces the potash solution the test for acetone is as follows: On adding the ammonia to a solution of sodium-nitroprusside and urine the ammonia solution remains on the top; thus there is a clear solution uppermost with the urine solution below. Should acetone be present, even in minute quantity, a well-marked and absolutely characteristic ring of magenta (or petunia) appears within from one to three minutes at the junction of the two fluids and gradually *spreads upwards* pervading the whole of the ammonia solution if acetone is present in considerable amount. In the absence of acetone usually no coloration occurs, but sometimes an orange-red ring forms at the junction of the urine and ammonia solution, but this bears no resemblance to the "acetone ring" described above, hence the presence or absence of the latter is easily ascertained by the method which the author believes has not been generally recognized. The strength of the solution of sodium-nitroprusside is not important, but it is important that it should be prepared fresh and a few crystals dissolved in a test-tube of water are sufficient.

The Hydatid Fremitus is of Muscular Origin.—Bernabei (La Riforma Medica) has made a study of the fremitus noted in the presence of hydatid cysts which has been described as a diagnostic sign of this condition. Two years ago, in a case reported by the writer, a distinct fremitus was felt over the liver while palpating this organ. This fremitus had all the characteristics of the hydatid fremitus, and it was afterwards shown on operation that the fingers could have come in contact with but a segment of the cystic wall at a point which was so dense and so calcified that the fremitus could not have originated in the cyst. He then thought of the possibility of a fibrillar contraction of the muscles under the mechanical stimulation of the palpating fingers; in other words, of a muscular fremitus. During the past two years he was able to convince himself of the presence of a muscular fremitus over the liver, which cannot to his mind be distinguished from the so-called hydatid fremitus. The muscular fremitus is produced when the mass of muscles is put upon the stretch, and when it is rapidly and interruptedly compressed or tapped. The muscular fremitus can be elicited in any muscular mass, both in the extremities and on the trunk. It can be obtained in any part of the abdomen, even in the lumbar region. In some persons it cannot be obtained at all, and in many others it is so slightly marked that it can scarcely be felt. It is an inconstant phenomenon, as it cannot always be reproduced at will. Thus, it can be obtained one day, and will be absent for some days or weeks. The fremitus on the abdomen can be felt most distinctly in persons in whom there is an increase of intra-abdominal tension. Probably it is the expression of an abnormal muscular excitability induced by intraperitoneal lesions, by subcutaneous

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lesions, or by general nervous conditions. The muscular fremitus when marked can also be heard by auscultation, in which case Bernabei calls it "phonomyoklonus."

Turnip-top Treatment of Chronic Diarrhoea and Dysentery.—Wilson and Pressly, Birmingham, Ala., (Journal of the Kansas Med. Society) report six cases, four of chronic diarrhoea and two of amebic dysentery, microscopically diagnosed which were successfully treated with a diet of "greens" composed of turnip-tops. One of these patients, on going where the diet was not to be had, suffered a relapse and died, the other continued well. Other vegetables, such as mustard, phytolacca and spinach, are also mentioned as having been used to some extent. The attention of the authors was first called to the remedy by the recovery of an apparently hopeless case on "poke salid" (phytolacca) after leaving their care. Of the two cases of amebic dysentery, one patient had tried all the ordinary remedies, and was ready to undergo an appendicostomy or an enterostomy if it would relieve him, as his condition was extreme. The other was not so bad, but had given up his work and never expected to be able to take it up. Both made good recoveries under the "turnip-greens" diet. Wilson and Pressly have also tried it in two cases of well defined gastric ulcer, in one successfully. The other patient was nearly moribund, and while he was able to take the diet better than anything else, it failed to save him. The method of cooking is important, as it is very unpalatable if not properly prepared. As prepared as a domestic dish in the South, ordinary bacon is used, boiled half an hour, and the turnip tops, spinach, mustard or phytolacca tops are added and allowed to boil for one or two hours.

Protective Function of the Liver Against Intestinal Toxins.—Petrone and Pagano (La Presse Medicale) describe the functions of the liver as protective against the vegetable alkaloids, many mineral poisons, foreign substances that occasionally find their way into the intestine, such as ammonia and the aromatic substance due to putrefaction of albuminoids, peptones, albumins, soaps, and alcohol. Also against saturated solutions of bicarbonate of soda, sulphate of soda, chloride of sulphur, adrenalin, sulphuric ether, chromic acid, and phosphorus. It protects against some microorganisms, and does not against others. It acts against tetanus toxin, cholera, bacillus, coli, alcoholic extracts, putrid materials, and alcohol typhoid materials. The action against bacteria is due to phagocytosis exerted by the epithelium of the blood-vessels, according to some. Others refer it to the amount of glycogen contained in the liver. The authors have made experiments to ascertain whether there is a protective action against the ordinary intestinal toxins. The toxic substances were injected into a mesenteric vein and into a peripheral vein and the results compared. The results lead them to conclude that the liver exerts a marked protective action against ordinary intestinal toxins. The first barrier against these toxins is furnished by the walls of the gastrointestinal tube, and many of them are thus removed. Those that are left meet a second obstacle in the hepatic gland, with its rich circulation and innumerable endothelial elements. The lung then acts on those that have escaped the liver, and last of all the blood by means of circulating leucocytes continues the action.

Amyl Nitrite in Post-Partum Hemorrhage.—Keith (Brit. Med. Jour.) was called to attend a patient in labor. She was a 4-para, aged thirty-three, and had had a very bad previous confinement owing to severe post-partum hemorrhage. So severe, indeed, was it, that her medical attendant was unable to leave her till eight hours after delivery. During her last pregnancy she had been in a very poor state of health, which was partly due to the fact that she was unable to obtain a sufficient amount of nourishment. The labor was normal until the extraction of the placenta, when profuse flooding commenced. This was, however, almost immediately arrested by the inhalation of a capsule of amyl nitrite. After a hot saline infusion of two pints per rectum, the pulse, which had run up to 120, soon improved, and in less than an hour was 86. No further trouble followed.

A Case of Chloroma.—Reynolds (London Medical Lancet) gives the detailed history of a patient, a boy of fourteen years, with symptoms which led to a provisional diagnosis of acute leukemia. The whole period covered from the initial symptoms till death was about ten weeks. The terminal symptoms were a rapidly progressive anemia, an irregular fever, and enlarged spleen. No progressive glandular enlargement could be made out and with the exception of the last day or two of life the patient did not complain of any pain. Autopsy findings are given in full and microscopical examination was made of sections of tissue from different parts of the body. The final diagnosis was chloroma. This disease, says the author, is often classed with melanotic sarcoma. Some authorities regard it as a form of leukemia. In this particular case the history, clinical course, and distribution of gross lesions suggested an infective pro-

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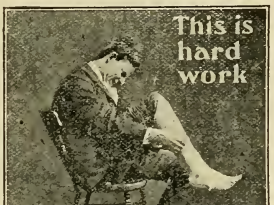

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cess. The morbid histology showed a general dissemination of what looked like lymphoma, but the blood vessels were well formed and the presence of newly formed capillaries indicated changes analogous to those found in subacute and chronic infections; but in spite of this the characters of the cells and their nuclei were distinguishable from those found in sarcoma. The quantity of the pigment found in the tissues was greater than could be accounted for by hemolysis alone. It was therefore evident that it was derived in part from cellular and nuclear destruction. The pigment appeared to be of the nature of a fatty acid combined with iron, and it had very strong reducing power. The whole case is fully worked out from every point of view.

The Nature of Carcinoma.—Westenhoeffer (Berliner Klinische Wochenschrift) reviews at length some of the considerations that lead to the view that the malignant growths represent true parasitic cell colonies which are at once anarchistic and despotic in nature. While originating from the body cells, they are made up of cells which have lost the normal characteristics that belong to these and have become an entirely independent type. This change the author endeavors to explain on the assumption that there has been an atavistic reversion of certain cells which have gone back to the primitive cell type, which is the lowest form of life and is represented by the unicellular animal and vegetable organisms. In order to prove this hypothesis he has made many biological experiments, one group of which was founded on the method of anchoring the complement and by which he tries to show that the cells of carcinoma metastases are heterolytic to animal and vegetable albumin of all varieties. The manner in which certain cells are supposed to be liberated from their normal restraints and rendered capable of this reversion to the ancestral type is explained somewhat in accordance with Ribbert's view of the effect in this regard of chronic irritation and inflammation.

Duodenal Ulcer and Lung Abscess.—Newbolt (Liverpool Med. Inst. Brit. Med. Jour.) read notes of a case of perforating duodenal ulcer complicated by abscess of the lung in a male patient aged 30 years, who had previously been in robust health. The treatment was by injections of polyvalent serum. Frequent attempts were made to localize the abscess with exploring needles; the abscess eventually emptied itself, on some days a pint to a pint and a half of pus being expectorated. Finally, the patient made a good recovery. The organism isolated conformed to the type of streptococcus termed *S. salivarius* by Andrews and Horder.

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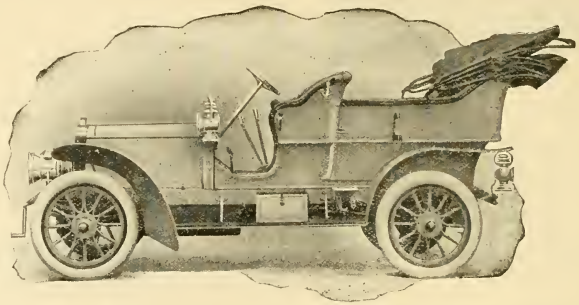

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The Charlotte Medical Journal.

VOL. XXXI CHARLOTTE, N. C., AUGUST, 1907. No. 2

A Report of Obstetrical Cases.*

By A. S. Pendleton, M. D., Henderson, N. C.

Mr. President, Ladies and Gentlemen:

It is my purpose to present to you in a desultory sort of way the history of some obstetrical cases which seem to me to have been rather out of the usual, and which impressed upon me very strongly the possibilities of obstetrical work in general practice.

Case No. 1.—Multipara; age 36; pelvis normal. I was called to see this case in consultation. Found body of foetus extruded to shoulders, head retained. Uterus firmly contracted. Violent pains at short intervals with no progression. Owing to almost tetanic condition of the uterus, I was unable to determine condition of the head other than that it was apparently larger than normal. Delivery was attempted by all of the usual methods, including forceps, without avail. Finally I thought I was able to detect crepitus through the uterine walls, so made a diagnosis of hydrocephalus, although it was impossible to examine, except through the abdominal walls, owing to the impaction in the pelvis. This diagnosis was confirmed; ½ gallon of fluid being removed by spinal puncture, after which delivery was easy.

This case was of special interest in that neither the regular attendant nor myself was called until labor had advanced to the stage described, making the diagnosis especially difficult. The patient made an uneventful recovery. The foetus was dead.

Case No. 2.—Primipara; age 19. This patient was found in a comatose condition, and a history of having had convulsions at five minute intervals for the preceding 36 hours was elicited. Examination revealed a generally equally contracted pelvis with conjugate diameter about six c.m., and the shoulder of 7months foetus presenting. Cephalic version was accomplished with much difficulty, one blade of forceps being used to bring down vertex, and it was found possible to deliver the foetus per vagina after crushing the head. While there was no laceration of sufficient extent to require suture nor other apparent injury to maternal parts, the patient died eight hours later, never having regained consciousness, and so in my judgment was another victim to toxoemia. In this instance neither the transverse position or foetus nor contracted pelvis had been diagnosed. Had the condition been recognized and relieved at the very beginning of the attack I am confident that the woman would be alive today.

I now wish to direct your attention to a condition which I find mentioned in most text-books, but to which very little emphasis seems to be given, and which the following cases would indicate is of more importance than our teachers have seemed inclined to believe. It is a condition of the lessening of the angle of the axis of the symphysis with the internal conjugate diameter. This condition materially lessens the anteroposterior diameter of the pelvis without giving any external indication of the same, and therein lies the danger. Here is a condensed history of three illustrative cases.

Case No. 3.—Primipara; age 23; pelvis practically normal from external measurements. Was called in consultation 36 hours after labor had begun. Examination showed following condition: Normal sized full-term, foetal head not engaged, slightly extended, and in the L. O. A. position, pains apparently strong, from 3 to 7 minutes apart, not effective. Thinning of lower uterine wall and the contraction ring rising. Forceps were applied, and using them as a lever the vertix was brought down, making flexion complete, after which delivery was fairly easy. Recovery of both parent and child uneventful.

Case No. 4.—Multipara; age 37. The condition found when called in consultation was as follows: Incomplete flexion at the superior strait of an apparently normal, full-term foetal head. Strong pains not effective. Full dilatation. The patient gave a history of three previous difficult labors, all of which were instrumental, though the largest child weighed only 7 pounds.

The condition was relieved very readily as in the preceding case.

Case No. 5.—Primpara; age 26. Had been in labor 24 hours when seen. Contraction strong and frequent, but not effective, though there was full dilatation. Bimanual examination showed a condition almost identical with that of the preceding two cases, and the same means brought about the same results.

Subsequent examination in the last three cases showed the trouble in delivery to have been due to the lessening of the angle of the symphysis before mentioned. In each of the cases the external measurements were practically normal. The external conjugate was normal in each. The internal conju-

*Read before the North Carolina Medical Society at Morehead City, N. C.

gate as usual estimated was normal. It was necessary to use Stiens pelvimeter to determine the true cause of the obstruction. When this was used, however, the cause was very readily determined, and we wondered why it had not been discovered before. One interesting feature of the three cases is that in every instance the condition of the symphysis seemed to interfere with flexion and this rather than the contraction caused the true obstruction, for when this was overcome by using the forceps as a lever to bring about the proper flexion subsequent delivery was easy, and perhaps might have progressed without difficulty, even though the instruments had been removed. This was not done, however, on account of the weakness of the patients, and for fear of prolonging labor.

In conclusion, I would say that I have seen two cases since these enumerated, which presented the same conditions, caused the same position of the foetal head, and were relieved by the same means

The Antitoxin Treatment of Diphtheria.*

By C. O. Abernethy, B. S., M. D., Raleigh, N. C.

Physician-in-Chief to the Dispensary and Demonstrator of Anesthetics, Medical Department, University of North Carolina; City Physician and City Superintendent of Health.

Prior to 1895, during which year diphtheria antitoxin was first generally used in the United States, diphtheria was, to both country and city physicians, one of the most dreaded diseases which they were called upon to treat, whole families of children being swept out of existence in a few days while the doctor was powerless.

But now the professional verdict is unanimous, and the discovery of antitoxin treatment of diptheria is classed with the discovery of vaccination for smallpox as one of the great triumphs of modern medicine. And the disease which was once so much dreaded has become to be considered not so serious provided, one can reach the patient in time and make the diagnosis early.

Before considering the treatment of diphtheria let us first discuss briefly the etiology and pathology of the disease.

Diphtheria is caused by the bacillus discovered by Klebs in 1883 and isolated by Loeffler in 1884. Hence the name Klebs-Loeffler bacillus.

The bacilli may lodge on any mucous membrane or abraded surface but the usual site is the mucous membrane of the tonsils, pharynx, nose, larynx, trachea, or bronchi. Here a croupous inflammation is set up and "the mucous membrane is congested, swollen, and infiltrated, and its surface is coated with a false membrane composed of fibrin, pus, and necrotic epithelium." The bacilli acting on the mucous membrane liberate toxins which very quickly begin circulating in the blood, and to this is due the more serious complications and results of diphtheria, such as the degeneration of muscular, nerve, and epithelial tissue, and organs of the body.

The chemical composition of the diphtheria toxins, according to the theory of Ehrlich, is that they are composed of three principal compounds—toxin, toxone, and toxoid. The toxin is the active poisonous constituent and causes the high fever, prostration, cloudy swelling, and later, fatty degeneration of the heart muscle, kidneys, etc. This is what causes death when it occurs suddenly in an acute attack of diphtheria. Toxone attacks the nerve cells and is generally slower in its action than toxin. Late paralysis of the muscles of the throat, respiration, and heart are supposed to be due to the action of toxone. The toxoid is not poisonous but has the power of neutralizing antitoxin, making it necessary to give large doses of the serum.

The importance of an early diagnosis in diphtheria cannot be overestimated, for upon the early recognition of the disease and administration of antitoxin depends in a very large measure the outcome. The majority of the cases of diphtheria have a comparatively gradual onset, with moderate fever, slight muscular pains, sore throat, swollen and tender glands in neck, tonsils swollen and covered with grayish or yellowish white membrane which when forcibly stripped off leaves a bleeding surface. Tonsilitis, on the other hand, generally has a sudden onset, with distinct chill, high fever, intense muscular pain, especially in the back, and with systemic symptoms more pronounced than the local. But no matter how much experience a man may have in clinical diagnosis there are cases which he cannot distinguish without the aid of cultures. It is my belief that every case of suspicious sore throat should have a bacteriological test. This can be easily had and no time lost. Each doctor can get a supply of tubes from the State Bacteriologist, and when he has a suspicious case take a swab from the throat of the patient and administer antitoxin immediately. Send the swab to the State Laboratory requesting that the doctor be notified by telegraph the result of the examination. In twenty-four hours an answer can be had. Thus no time is lost and no risk taken if the case happens not to be diphtheria, because the antitoxin is absolutely harmless when given to a person without the disease. But if the case proves

*Read before the North Carolina Medical Society at Morehead City, N. C.

to be a true case of diphtheria the physician has gained twenty-four hours time, which is invaluable.

In nasal diphtheria of a mild form, which is responsible for many of the outbreaks which cannot be traced to the source of infection, a cultural diagnosis is the only correct means. For here the membrane is late in appearing in the throat where it can be seen. In laryngeal diphtheria a culture may not be of any assistance, because the membrane is situated so far down in the throat that the swab cannot reach it. But the diagnosis of laryngeal diphtheria is generally easily made where one finds marked dyspnea with rigidity of the sterno-cleido-mastoid muscles, with supra-clavicular and sub-sternal retraction, provided, one can exclude retro-pharyngeal abscess, peritonsilar abscess, and a tumor pressing on the larynx.

One argument against the extensive use of antitoxin in the treatment of diphtheria is its cost. We must admit that at first glance this does seem a difficulty. But when we consider that before the advent of antitoxin the number of visits to the patient was greater and therefore the doctor's bill larger, then we see that part of this item disappears. Also we must remember that we have a human life at stake and expense should not be considered. But it will be said that some people cannot buy the antitoxin at any price. So it would be with any other drug used. For that reason I think it the duty of every town and county to furnish drugs for its poor, and I think we as physicians should try to get that plan adopted by our town and county boards. It is in vogue in some of our cities, and works admirably. The cost of the serum is great on account of the expense the companies have in preparing it and the method of exchanging the tubes after certain dates.

In the preparation of antitoxin the strictest antiseptic precautions are observed, thereby eliminating the idea that at times septicaemia is caused by the injection of antitoxin. Large flasks of peptone bouillon are inoculated with pure virulent cultures of the diphtheria bacillus, and set aside in incubating rooms from three to five days. During this period a large amount of diphtheria toxin is formed. Trikresol is then added to kill the bacilli, which are separated from the toxic fluid by filtration. The toxin after being standardized is injected into the horse. A hypodermic injection of a very small quantity is given, which dose is gradually increased and repeated every few days. As this is kept up for several months the horse gradually acquires a tolerance to the toxin, and his blood and tissue juices develop antitoxic power. Then the horse is bled and if the serum is of the required standard the blood is set aside until the serum containing antitoxin separates from the solid constituents. The serum is then put up in sterile syringes ready for use.

The dose of diphtheria antitoxin is variously given by different authors. The U. S. Pharmacopeia gives 500 units as an immunizing dose and 3,000 units as an average curative dose. In the administration of antitoxin, more so than in any other drug, the dose should be large enough and repeated often enough to get the therapeutic effect. The tendency of the profession is to give small doses of antitoxin, due probably to its cost. In addition to this there is an idea that its administration is dangerous. But, on the contrary, the real danger is in not giving enough. It has been proven that a dose insufficient to neutralize all the toxin is practically useless, as the patient will die as surely as if no antitoxin were given. It has been claimed that the majority of deaths by late paralyses are due to insufficient dosage. The best effects are produced by giving large doses and repeating often. The argument that antitoxin produces heart paralysis has no foundation whatever. There are no cases on record so far as I can ascertain where antitoxin has had any ill effects upon the heart. The tendency is rather to strengthen a weak heart. The only ill effects produced by large doses of antitoxin are the arthralgia and urticaria. And these are produced at times even by small doses. There has been no limit set to the dose of antitoxin, and the only safe rule in administering the serum is to give it until one gets the characteristic reaction of the membrane shriveling, the odor becoming less fetid, the pulse stronger, and the general condition of the patient improved.

The greatest advantage is obtained from antitoxin if it is given at the earliest possible moment of the disease, as it often prevents the formation of the membrane if given early enough. The report of the Massachusetts State Board of Health for 1902 gives the following statistics bearing on this phase of the subject:

"In 1,433 cases in which antitoxin was given on the first day of the disease the mortality per cent. was 7.9; when the serum was given on the second day in 3,284 cases the percentage was 6.2; when it was given on the third day in 2,654 cases the percentage was 9; on the fourth day in 1,687 cases the percentage was 12.9; on the fifth day in 864 cases the rate was 15.9 per cent.; on the sixth day and later in 1,242 cases the percentage was 17.6."

Of course the possibility is that the cases

cited here as given on the first day were really the second, as the doctor generally sees the patient late; but even taking that into consideration, the importance of early administration of the serum is readily seen, as the mortality per cent. on the first day is given as 7.9 and on the sixth day as 17.9, showing a difference of 10 per cent.

In speaking of the amount of antitoxin to be administered prominent authorities say that in the early stages of the disease from 4,000 to 6,000, or even 8,000 units should be administered, and this should be repeated every six to eight hours, depending upon the condition of the patient and the appearance of the membrane. No patient ill with diphtheria should be considered hopeless, for the heroic administration of antitoxin has saved many patients which were apparently moribund.

In laryngeal diphtheria the importance of early administration of large doses of antitoxin is readily seen. If the patient has that peculiar brassy cough, rigidity of the sterno-cleido-mastoid muscles, and dyspnea, antitoxin should be given at once in doses not less than 4,000 to 8,000 units. This will often relieve the distressing symptoms, and the patient will rapidly improve. But if the symptoms get worse in six to eight hours, intubation or tracheotomy should be performed, and the dose of antitoxin repeated. If the tube becomes clogged by a thick, tough, tenacious mucus it is a symptom of extension of the diphtheritic process to the bronchi. Then antitoxin should be administered in large doses, such as 20,000, 30,000, or 40,000 units. This is the only hope for the life of the patient, and many are saved by this method.

The following cases might be of interest bearing on the subject of large doses of antitoxin:

From the Boston City Hospital records comes the case of a man nineteen years of age, who had been ill three days when admitted. He had enlarged cervical glands, with great tenderness; a profuse nasal discharge; tonsils greatly enlarged, meeting in the median line, and covered with a thick diphtheritic membrane; uvula covered with membrane; profound prostration. The patient had 90,000 units of antitoxin in five days, and was discharged from the hospital with complete recovery in thirty days.

Another case from the same hospital was a girl eleven years of age. Ill two days when admitted to the hospital. Her condition was as follows: Marked prostration, profuse nasal discharge, extensive membrane on the tonsils and uvula, a strong fetid odor, action of the heart irregular and the sounds indistinct. In four days she received 52,000 units of antitoxin and was discharged well in thirty-nine days.

Both of these cases had urticaria and arthralgia but did not experience much discomfort therefrom.

In my own practice I will mention two cases, the first a little boy four years of age. I saw him on the second day of the disease, and on examination found both tonsils covered with a thick diphtheritic membrane, with spots on the uvula; breathing was labored and child had anxious expression and flushed face. I gave him 3,000 units of antitoxin and called to see him again in six hours. His condition was worse and there were signs of extension of the membrane to the larynx. Administered 4,000 units of antitoxin and when I saw the patient six hours later his breathing was easier and his general condition much improved. He made an uneventful recovery.

The second case was a boy seven years of age who had a case of nasal diphtheria, which was diagnosed on the third day of the disease. Three thousand units of antitoxin were administered and the dose repeated in twelve hours. His condition grew worse, the membrane began to extend to both tonsils and uvula, heart became weak and irregular and very slow. The antitoxin was then administered every six hours and the dose increased to 6,000 units. In five days the patient received 26,000 units of antitoxin and began to get better. He made a slow recovery, having had otitis, which was difficult to control. Was troubled very slightly with urticaria and arthralgia.

Many other cases might be cited where large doses of antitoxin have been given, but the above are sufficient to show the distinct advantage of heroic administration of the serum in very severe cases of diphtheria.

In conclusion, I wish to quote Dr. John H. McCollom, Instructor in Contagious Diseases, Harvard University, and Resident Physician, South Department of the Boston City Hospital, who has perhaps had as much experience in the treatment of diphtheria as any one man in the United States. He says:

"No hard and firm rule can be made regarding the use of the serum. The agent must be given until the characteristic effects are produced on the diphtheritic membrane. In some cases 4,000 units will accomplish this; in other instances 60,000 to 70,000 units may be required. In the case of a patient ill with diphtheria there is no way of estimating the quantity of toxin generated by the membrane, and, therefore, one must administer the agent until its characteristic effect is produced, that is, the shriveling of the membrane, the diminution of the nasal discharge, the correction of the fetid odor, and a general improvement in the

condition of the patient. In the operative cases the beneficial effects of large doses of antitoxin has been marked, preventing in many instances the extension of membrane to the smaller ramifications of the bronchi.

"No case of diphtheria should be considered hopeless. Antitoxin should be administered in each and every instance. It has been my experience during the past few years to see so many patients, apparently hopelessly ill, recover, that my convictions are very firm on this subject. When the membrane covers the tonsils and uvula, profuse sanious discharge from the nose, spots of ecchymosis on the body and extremities; cold, clammy hands and feet, a feeble pulse, and a nauseous odor of diphtheria, and I find after the administration of 10,000 units of antitoxin in two doses the condition of the patient improves slightly; that after 10,000 units more have been given thereis a marked abatement in the severity of the symptoms, and that when an additiona 110,000 units have been given the patient is apparently out of danger, and eventually recovers, one must believe in the curative power of antitoxin. When one sees a patient in whom the intubation tube has been repeatedly clogged, and when the hopeless condition of the patient changes for better after the administration of 50,000 units, one cannot help but be convinced of the importance of giving large doses of antitoxin in the very severe and apparently hopeless cases. In the majority of instances these large doses are not required, particularly if the patient is seen early in the attack—4,000 to 6,000 units being generally enough to produce the characteristic effect on the membrane. In the treatment of grave types of the disease, small doses of antitoxin are of little avail."

It is evident from the facts presented—

First, that the use of antitoxin is the only scientific treatment of diphtheria, and that it should be classed among the great medical discoveries of the nineteenth century.

Second, that early administration of the serum is necessary to obtain the best results.

Third, that very large and almost unlimited doses of antitoxin are required in the treatment of severe types of diphtheria.

The Doctor as an Educator of the Public.*

By Dr. B. K. Hayes, Oxford, N. C.

From a scientific article by E. W. Brewster in The World's Work for April, 1907, I have copied the following:

"There is no stranger paradox of science than this: That knowledge tends to begin with things far off, to end with the understanding of things familiar. The study of the stars of heaven is the oldest of the sciences; the study of the human mind is the youngest.

There are no undiscovered mountains on the face of the moon as high as scores of charted peaks in Alaska and Asia.

The planet Mars has been mapped clear to the poles. Helium was discovered in the sun years before it was found on the earth; caronium is still known only there.

We have been sucking in with every breath argon, neon, krypton, and xenon, the new found gases, with whose conquest chemistry enters a new realm.

Radio activity turns out to be practically universal, while the successive transformations of the wizzard metal ends in lead.

Gravitation is the single natural force that remains unexplained.

What wonder then that life—the life that animates the grass of the field, the life that, without interruption, has been handed on from parent to offspring since the beginning of geologic history, the commencement of all things in nature—is the one thing which science understands least, the final problem which science is only now beginning to approach."

In like manner, Mr. President, we of the medical profession have devoted ourselves to the study of rare diseases and abstruse problems. We have mastered systems of therapy that would have caused our forefathers to stand aghast. We are familiar with the rarest serum concocted in German laboratories. We laugh to scorn the professional brother who cannot discuss the latest treatment of some far off tropical disease.

With no thought of personal gain we give to the public the benefit of our reasoning and of our research.

The intelligent layman reads in current literature of our most scientific advancement. These articles are not the product of ignorance nor of guess work, but are from the pens of the foremost specialists of our age.

A Pasteur discovers a treatment for hydrophobia and civic pride demands a Pasteur Institute.

A Behring discovers a treatment for diphtheria and within a year public opinion demands that we use it whether we believe in it or not.

A Koch announces a tubercular antitoxin and immediately the physician is denominated a "back number" who is not prepared to administer it.

A trypsin treatment for cancer, an "opsonic" treatment for the blood or a thyroid extract treatment for the glands is evolved, and we, by carefully prepared papers, by

*Read before the North Carolina Medical Society at Morehead City, N. C., June 1907.

public addresses, by our conversation in the social circle or at the bedside render an eager public as familiar with these things as we ourselves.

In matters pertaining to the treatment of disease we are self appointed educators, and every physician

"Like Cato gives his little senate laws
And sits attentive to his own applause."

Nor has the surgeon been less diligent in this regard than the physician. Every man who has a belly ache has been taught that he must either have his appendix removed or his hepatic duct explored for gall stones. Indigestion is the result of gastric ulcer or of carcinoma. In either event an abdominal operation must be done.

I am not here to oppose surgery. I have no criticism to make of medical research. I have elsewhere undertaken to prove that modern civilization could not exist were it not for the accomplishments of medical science.

I am proud of my profession. I am proud that I can say of the men who expelled small pox, yellow fever, hospital gangrene, and other messengers of death that they were my brethren. But, Sirs, as educators of the public "we have strained at a gnat and swallowed a camel."

We have gratified the desire on the part of our friends to hear some new thing. We have instructed the public in matters seemingly occult and mysterious. But in those things which affect men in their daily lives; in the thing of greatest importance to health; in the essential knowledge of simplest hygiene there is profound ignorance.

There are four simple words whose meaning and importance, if grasped by the public, would reduce to one-half the present death rate in North Carolina. They are *Ventilation*, *Exercise*, *Diet*, *Cheerfulness*.

Let me enlarge upon these a little. Last year, in consultation with a physician who is doing a large and successful practice, I went into the room of a patient with pneumonia. The room was hot, close and foul-smelling. When I advised that a window be opened my consultant objected on the ground that night air was unhealthy. He stated that he himself had been made sick by breathing night air, and refused to let the patient's window be opened. When ideas like this are still held by the profession what can we hope from the laity?

Our churches, theatres, court houses and school rooms are poorly ventilated—frequently not ventilated at all—and no man raises his voice in protest.

Half the physicians who compose this society have, during the past winter, worshipped God in an unsanitary church building; permitted their children to sit in unsanitary school rooms and paid their hard earned dollars for the privilege of sitting three hours together in an unsanitary opera house.

With the advent of summer come the diseases of children. We find our little patients with a temperature of one hundred and five. The windows and doors of the sick room are closed. The child is wrapped in flannel. It is held in the fat lap of a loving grand-mother, and its life is slowly burned away.

The indifference everywhere noticeable to ventilation may also be observed in regard to exercise and to diet. The overworked and under-fed patient presents himself with tuberculosis; the under-worked and over-fed comes with some of the various manifestations of uric acid. The object of this paper is not to suggest the amount or kind of exercise for patients. The point which I wish to drive home is this: that the ignorance, indifference and stupidity on the part of the laity in regard to these things is a condition for which the medical profession is largely responsible.

If we are in reality the custodians of health; if we have the uplift of humanity and the welfare of our patients at heart; if we are to remain the educators in matters of hygiene then we must instruct people how to lead sanitary lives. Finally, it seems to me that the grossest ignorance and most criminal stupidity prevails in regard to the law of suggestion.

Suppose you are invited to dine with a friend. Before dinner he informs you that the meal is not such as to agree with your stomach. At table he plies questions like these. Do you think you can take it? Is it making you sick? Are you nauseated? Do you want the slop bucket? Are you going to puke?

Would any man enjoy such a meal? And yet just such questions are constantly being asked in the sick room. Recently I said to a loving husband that no one must go into the sick room of his wife while weeping. With profound gravity he replied that tears showed sympathy and interest and that these were very grateful to a sick person.

When I have asked friends not to make unpleasant suggestions in the sick room, but on the contrary to suggest health and life and hope and joy, the charge is sure to come "You are a Christian Scientist."

Sirs, if we have so nearly lost our birthright that we can no longer invoke cheerfulness in the sick room save in the name of Mother Eddy, it were better that a millstone were hanged about our necks and we were drowned in the depths of the sea.

Are we to sit supinely in our homes while tuberculosis is decimating towns and vil-

lages? Is typhoid fever rampant to raise no voice of protest from the profession? Are American stomachs and nervous systems going to rack and ruin while we sit by with a smile? Or are we to listen to the gospel of a "simple life" preached by a layman? to the message of hope from the Christian Scientist? to sanitary science from the civil engineer?

Gentlemen of the medical profession, your people love you. Your towns and counties value your services. Your patrons look to you in sickness as a child cries to its parents in the night. To you is given the power to stamp out many of the diseases which prevail in our State—chief among which is tuberculosis. And this power can best be exercised by a systematic, intelligent education of public opinion.

Why is the Middle Ear an Accessory of the Upper Respiratory Tract; which often Becomes the Etiological Headquarters of Otitis Media and Acquired Deafness? †

By W. P. Reaves, M. D., Greensboro, N. C.

If the middle ear is an accessory cavity of the upper respiratory tract, its physiological function ought to be co-dependent upon normal physiological breathing; plus the proper ventilation of the middle ear through the eustachian tube.

Now gentlemen, that we may reason from cause to effect it will be necessary to briefly touch upon the anatomy of the tympanic cavity and its adnexa, and to understand the normal physical condition, upon which its physiological action depends. It would be impossible to appreciate a pathological injury not knowing the physiological function. It is optimism to expect normal physiological action when a physical law upon which it depends is violated.

The middle ear is hidden away in the base of the skull in the petrous portion of the temporal bone, midway between the auricle and the naso-pharynx communicating with the naso-pharynx through the eustachian tube, which is about 4 c.m. in length and 1 m.m. in diameter, lined with a continuation of the mucous membrane of the naso-pharynx and extending into the tympanic cavity.

The middle ear consists of two parts, the lower and narrower, bounded externally by the tympanic membrane, and internally is the opening of the eustachian tube. It will hold about 2 m., and contains air. The handle of the malleus projects from the attic and is attached to the drum.

The upper and wider part called the attic is somewhat dome-shaped and contains three of the smallest bones in the body, the malleus, incus, and stapes; for transmitting vibrations of sound waves from the drum to the internal ear; and two of the smallest muscles, the tensor tympani and stapedius, acting as governors to control the vibrations of the tympanic membrane and ossicles (the protection of these two functions was the incentive for writing this paper). It is bounded above by the tegmen tympani, a transparent plate of bone separating the attic from the middle fossa of the skull, which becomes a dangerous and frequently a fatal point in purulent otitis. The aditus and antrum, leading from the posterior and external angle of the attic to the mastoid antrum, increasing its pneumatic capacity in the normal ear, and apparently serving as a drip cup in purulent otitis.

Therefore, the tympanic cavity is a protective chamber for the ossicles and muscles of the middle ear, and a ventilated air chamber establishing an equilibrium of air pressure on both sides of the drum; giving a drum with absolute freedom, and is as sensitive to sound waves as if suspended in the air. It is lined with muco-periosteum, which is reflected over the ossicles, permitting their free, easy, and quick motion. If the ossicles were covered with skin, the flexibility of the joints would be greatly reduced, and in the same proportion reduce the acuteness of the hearing. Thus the middle ear must be ventilated not simply with air, but moist warm air to protect its delicate lining. If our logic is sound that the tympanic cavity is a protective chamber for its ossicles and muscles—a ventilated air chamber—and has a delicate lining that raw air would dry and harden; injuring or destroying the physiological function of the middle ear; then the answer to the "why" of this paper is, that the ventilation of the tympanic cavity with moist warm air is essential to protect its physiological function. Nature's only available supply is by tapping the upper respiratory tract by an eustachian tube; thereby making it an accessory cavity through which intervention ventilation with moist warm air is maintained.

Upon these anatomical, physical, and physiological facts let us study the second half of the subjects, which are the descendants of local or pathological causes in the upper respiratory tract; that prevents the normal physico-physiological relations of the tympanic cavity and its sound conducting apparatus, by obstructing the eustachian tube or by making it a common pathological carrier. In this way it becomes the connecting link in possibly 90 per cent. of otitis media and acquired deafness:

1st. By failing to perform its function of

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ventilation.

2nd. By invasion of pathogenic bacteria from the naso-pharynx through the tube into the middle ear.

3rd. By extension by continuity of inflammation from the naso-pharynx through the tube into the middle ear.

If it be true that otitis media and acquired deafness are sequelae of local or pathological condition in the rhino-pharynx, then they are the third generation of the etiology producing these conditions; whose predisposing, acquired, and exciting causes are practically beyond the physician's control; but the local and pathological causes in the upper respiratory tract are accessible and amenable to treatment, and he who fails to appreciate their clinical importance will not receive the gratifying reward of an ever grateful patient.

Predisposing Cause.—Should the child be so unfortunate that a part of his hereditary or constitutional assets be labelled "Status Lymphaticus," a term that the Germans have used to designate an exaggerated susceptibility of lymphoid tissue, in which inflammation sets up hyperplasia in the lymph nodes, out of proportion to the exciting cause. The hyperplasia continuing when the exciting cause has subsided; especially adenoids in the naso-pharynx and tonsils in the throat, which are sometimes hypertrophied at birth.

"Status Lymphaticus" is not always hereditary, but may be acquired for want of proper hygienic surroundings, dietetics, and proper clothing; which are essential for the normal development of the child. It is seen to perfection in cities, crowded tenement houses and institutional reared children.

The most prominent exciting causes acting upon these hypersensitive lymphatics in the upper respiratory tract are colds, whooping cough and measles, and the exanthematous fevers, which every mother feels that her child must have because they are childrens' diseases.

In most instances, if not removed, the adenoids and tonsils begin to atrophy at about the age of puberty, and may cease to be a source of trouble; but often leave an intumescent or hypertrophic rhinitis, or a chronic naso-pharyngitis as their pathological successors. Other local causes, more frequent in adults, are spurs, ridges and deviation of the septum. One or more of these local factors will produce partial or complete obstruction of nasal breathing, plus their mechanical irritation produces congestion of the rhino-pharynx with pathological changes of its mucous membrane, lessening its resistance to pathological bacteria and produces pathological secretion, which blocks its physiological function. Giving a condition, especially in the exaggerated case of children, that is best described as a physiological constipation with a pathological diarrhoea of the rhino-pharynx, from whence nature expects the middle ear to be ventilated with moist warm air through the eustachian tube: but, instead, ventilation is often prevented; if not, infection may enter the middle ear during ventilation.

To understand the progressive steps of acquired deafness we must, by a logical deduction, have an appreciation of the immediate and remote sequelogical steps, especially those produced by a departure of the normal areostatic and physiological relations of the upper respiratory tract and the middle ear. Then, and not till then, will the prognosis be more favorable; because the treatment will be more rational, removing the cause rather than treating the deafness, which is a symptom.

Feeling the necessity of a classification for deafness, I have borrowed the fever classification; reversing its order from continued, remittent, and intermittent; to intermittent, remittent, and continued deafness, in order to associate the three degrees of deafness with the three stages of chronic catarrhal otitis media, of which they are the exponents. Like every chronic inflammation of the mucous membrane, it passes through three stages. The chief characteristics of the stages are:

1st. Hyperaemia or acute inflammation with secretions or exosmosis of serum;

2nd. Hyperplasia of the connective tissue; and

3rd. Sclerosis or atrophy of the hypertrophied tissue.

These three stages seem to have a selective affinity for certain ages; especially the first and second. The first begins in children, and emerges into the second about the age of puberty. The third is the retrogression of the second whose initiation and duration is dependent upon the degree and rapidity of the first two stages.

To apply the reversed clinical interpretation of the fever classifications, as the fever goes above normal, the hearing below: then intermittent deafness is a temporary impairment of the hearing that returns to normal when the cause is removed—therefore, there cannot be any permanent pathological lesions. These causes are areostatic disturbances, plus the congestion and secretions found in the first stage of catarrhal otitis. All three may be active at the same time, but generally one predominates the others.

Remittent deafness is in those cases where the hearing is always below normal, but at

times from such transient cause as found in the first stage of catarrhal otitis; the hearing goes below its normal, and returns to its average when the cause subsides. It is generally associated with the second stage of chronic catarrhal otitis. The thickened and congested mucous membrane stiffens the muscles and joints of the ossicles, which reduces their sensitiveness to sound waves.

Continued deafness is in those cases where the hearing is so much impaired that the victim is at a social and financial loss. It is the exponent of the third stage of chronic catarrhal otitis, produced by the atrophy of the hypertrophic connective tissue, which by its cicatricial contraction ties down the muscles and ossicles so firmly that ankylosis of the joints may develop.

Let us for illustration take adenoids, the most frequent and the most positive local factor in children, which produce by obstructing the eustachian tube, areostatic disturbances and hyperaemia of the tympanic cavity with secretions:

1st. By direct pressure against the mouth of the tube.

2nd. By producing secretion which block the fossa of Rosenmuller and the tube.

3rd. By producing active or passive congestion or acute eustachian catarrh.

These produce a temporary stricture and prevent ventilation of the tympanic cavity, converting the middle ear into a closed cavity filled with air.

It is a well established fact that air imprisoned in a closed cavity in the human body will be absorbed, rarifying the air or producing a vacuum. Owing to the non-collapsable bony wall of the tympanic cavity the force of the vacuum is inevitable. Nature's first aid to prevent the vacuum is by retracting the drum; the air pressure being greater externally than internally fixes the drum, which in turn fixes the ossicles—making the whole of the sound conducting apparatus more or less stationary—blocking its function; producing a typical intermittent deafness, which is easily demonstrated by prolitzeration. If ventilation is not re-established the increased force of the vacuum puts the mucous membrane and the blood vessels on the stretch, plus the tension of the drum and the pressure of the stapes in the oval window of the cochlea produces the primary pain in acute otitis media. This fails to prevent the vacuum as the absorption of the air continues—the capillaries in their crippled condition, through a spirit of revenge, pours out enough serum to restore the equilibrium, relieving the pain but not the deafness. Now, should the vessels have reached a paralytic state from the minus tension of the vacuum or from toxins, the middle ear will be left to the mercy of the force of the heart, which will continue to pump serum or sero-blood into the tympanic cavity; swinging the drum from its retracted position to extreme distention, looking as if it would pull the ossicles from the attic.

Now nature's last resort for compensating is gone, and the pressure increases till it equals or exceeds that in the capillaries and produces secondary pain by distortion and pressure on the inflamed area; which pressure, if sufficient, will cause necrosis for want of nutrition. This is an exaggerated form of serous otitis. Tympanotomy is indicated to prevent sloughing. But more often they do not reach this stage, the serum is absorbed as the cold improves and ventilation is re-established. The mother's diagnosis is neuralgic earache—for it did not run—but have we not the clinical assurance of a local cause, the neuralgia being a symptom? Many of these attacks covering a few years completes the first stage of chronic catarrhal otitis, and establishes the second stage which we have mentioned. On the other hand should any pathological bacteria have been harbored in the tympanic cavity before, or entered during the attack by a forcible effort to blow the nose, they now have found nature's culture media for their propagation. The condition rapidly passes beyond an acute serious otitis media to a typical acute purulent that needs no introduction to you, but often has the ability to baffle our wits, defy our attacks, inflict unbearable pain upon our patient, and may retreat into the mastoid antrum, setting up an acute mastoiditis. Should it become chronic, it will lay waste to the beautiful ossicular structure of the attic, perforate the drum, destroy the hearing, and may by a necrotic process eat through the tympanic plate, striking down its victim with an explosive septic meningitis or a brain abscess.

More than 75 per cent. of the treatment is to return to nature the physico-physiological relations of the upper respiratory tract and the middle ear by re-establishing nasal breathing and then re-establish ventilation of the tympanic cavity through the eustachian tube; by removing adenoids and tonsils, especially in children; and by the correction of septal deviations, and by the removal of septal ridges and spurs in adults —then if present reduce the intumescent or hypertrophic rhinitis, or chronic naso-pharyngitis, which are frequent sequelae of the above. Remembering that chronic catarrhal naso-pharyngitis often extends by continuity through the tube into the tympanic cavity, and may close the gateway of ventilation by a hypertrophic stricture of the tube. Unless this obstruction is removed the deafness will progress regard-

less of the other treatment.

This brings us to the pinnacle where the pathological sentence of continued deafness is passed upon thousands for life; for the hypertrophic tissue will advance in strict obedience with the law which governs all newly created connective tissue, and by its cicatricial contraction produces an organic stricture of the eustachian tube; ventilation is impossible. The areostatic, vascular and nutritional disturbances will be permanent, the pathological condition progressive, slowly but surely destroying the remaining physiological function of the middle ear.

The last suggestion that I want to drop is that the politzer bag in these cases is just as inefficient to dilate an eustachian stricture as is the—*vis*: *A Tergo* of the bladder to dilate a urethral stricture during urination, and in the former as in the latter sounds and bougies must be used.

Rheumatism.†

By J. B. H. Knight, M. D.

Mr. President and Members of the North Carolina Medical Society:

In making my report as Chairman of the Section on Practice of Medicine I have nothing new to offer. So far as I know there is no new disease discovered that is of any practical importance to us, and no new remedy that has anything to especially recommend it above the old and tried ones.

It is of some of the old and tried remedies and measures of which I wish to speak, and that I may most fittingly do so I have selected the old and well worn subject of Rheumatism.

This disease is as old as the hills, is found in all countries and climes, among all classes and conditions; the rich and the poor have it, all ages from the infant to the centenarian, both sexes, but males are most liable on account of being more exposed than females. And it is found in subjects between the ages of 18 and 50 more frequently than in the younger or older.

It is also found in many different varieties, and many degrees of the same variety. It may affect a single muscle or joint, or it may involve any number of muscles, or the whole body, or one joint, or any number of joints.

Rheumatism is not the simple thing that many would have us believe. It is often a very obscure disease, and is liable to be confounded with, or by a number of diseases, for example neuralgia, sciatica, locomotor ataxia, overstrain of muscles, or some local injury, as from a blow or fall, etc.

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There are so many different kinds of rheumatism, arising from such various causes, it makes it very difficult to properly classify it under its different heads or varieties. In doing this I shall not attempt to follow any author, but shall do so from my own experience.

I would divide it into two distinct forms: one affecting the muscular system and the other the osseous, mainly the joints and the synovial membranes and sheaths of the tendons. There are several distinct forms in each of these varieties, any of which may be acute or chronic. First, I will speak of the forms affecting the muscular system. The most prominent of this variety is what is generally known as muscular rheumatism, which may affect a single muscle, a group of muscles, a whole limb, one side, or the whole body. This may be with or without fever. It is generally caused by exposure to cold, or damp, or both; is not confined to age or sex, but is generally found in the person with a rheumatic diathesis. The blood is nearly always acid, the urine scant, of high specific gravity, highly colored and characteristic odor, and loaded with the urates. The patient has a foul tongue and bad breath. These symptoms are in proportion to the gravity of the case. If the fever is high, say ranging from 100 to 104 degrees I would say give your patient a good dose of calomel, rheubarb and podophylin. Follow this with the following:

℞

Quinine Salicyl.	dr j
Acetanlid	" "
M. Ft. Capsules	no xvj

Sig. One every three hours until fever subsides.

Then put him on the following:

℞

Sod. Salicyl.	dr viij
F. E. Phytolacca Rad.	" iv
" " Nux Vomica	" j
Aqua Q. S. ad	oz iv

M. Sig. One teaspoonful in water every three hours.

This should be taken until all the pain and soreness are gone. If the patient is anaemic a good tonic should be given for two or three weeks. Some of these cases require a good alkaline diuretic, so I often combine bi-carbonate potash in the foregoing prescription. I sometimes give this separately on account of the bad taste. Then you may use the effervescing Salts of Bi-Carb. Pot. or Soda or the effervescing salts of Formin Comp. as put up by Warner & Co.

Frequent bathing of these cases is good treatment. Keep the bowels well open, and the skin and kidneys active. I also

prefer a salt made from the pure salicylic acid to one made from a synthetic salicylic acid. I am of the opinion that malaria plays a prominent part in the cause of this form of rheumatism, and find that quinine is a good remedy. I prefer the salicylate of quinine, but when this is not convenient I give the sulphate, or muriate.

Rheumatic fever belongs to this type, but is of more sudden onset and the fever runs higher. The treatment is largely the same, but more vigorous. In these forms the heart is more likely to be affected and the danger is in proportion to the height of the fever. So I always endeavor to reduce the temperature as soon as possible. I have found nothing quicker or more reliable than acetanlid. Give this in combination with quinine and caffene or nux vomica. A favorite prescription with me is the following:

℞

Acetanlid	grs iij
Quinine Sul.	" ij
Citrate Caffene	" j
Gingerine	" 1-16
M. tablets	j

Give one of these every two to three hours until the fever is reduced. Then follow with the prescription given above with the salicylates.

I have found Formin or the Formin Comp. to be of excellent service in any of these cases where the kidneys were derelict in duty. In some of these severe cases where the patient lies in one position for a long time, for the pain is so great they dread to move, and sometimes morphine has to be administered, which I never do until absolutely necessary. You have to look out for bed sores, which may be avoided by giving constant care and relieving pressure from the spots showing signs, and bathing these spots well with 95 per cent. alcohol several times a day. Another complication we must look out for, and ward off if possible, is hypostatic pneumonia. This is liable to occur in any of the asthenic cases, or in those with a weak heart. This is best avoided by frequently changing the position of the patient and giving suitable heart tonics —strychnine, digitalis, strophanthus, belladonna, etc.

While the muscular variety of rheumatism is more frequently found in males, in that period of life in which they are most active, and consequently most exposed, it is due to the fact that they are more exposed to the climatic and weather changes.

In speaking of the varieties affecting the osseous system, I shall include those affecting the joints, synovial membranes and sheaths of tendons.

The joints most affected are the knees, ankles, fingers and hips. While the other joints, any of them are liable to be affected, these are most subject in the order named. The joints become painful, in some cases extremely so, and swollen, the skin having a glistening appearance and in the severe cases becomes red and extremely painful; patient cannot bear to have the joint moved the least bit. Some of these cases the skin bears a pale glistening appearance, but painful all the same. When the synovial membrane is involved we are likely to find a puffy condition of the joint, with an accumulation of fluid in the joint. The constitutional treatment in these cases is largely along the manner outlined for the muscular varieties, but almost all of these require some alterative to aid in absorption of the fluids in the joint. I generally give the iodides of potash or sodium. In some of these cases affecting the joints there is considerable of a calcarious deposit thrown out which causes enlargement and stiffening of the joint. I will speak of the local treatment of this form along with the others in which enlargement and stiffening take place, for it is this form I especially wish to emphasize the treatment and try to bring out some new ideas. Next and similar to the joint variety is the variety affecting the sheaths of the tendons and muscles. Here we may find fever or not. Whenever we do, it is not likely to run very high. In some cases the skin presents the normal aspect but the pain, and great pain, is present. There may be swelling or not, and the skin may be red or not. In this variety there is a strong disposition to draw —we often find the tendons drawn up tight and feels like a rope underneath the skin. There is also a plastic deposit thrown out which stiffens the limb and binds down the muscles and tendons so that if they are not broken up, and kept limbered up, they soon become fastened down, and the limb becomes immovable. The limbering process is indeed a painful one, so much so that the average patient has to be put under the influence of an anesthetic before it can be done at all, but when this is necessary do not hesitate to do it. Place the patient completely under the anesthetic and limber up the joint and flex the limb in every possible way, and massage the muscles good. Some cases have such a strong tendency to draw that the limb has to be put in splints and kept so until this disposition is overcome. Of course the limb is taken dowd every day and manipulated as well as it if possible to do so, and while doing this use some good anodyne absorbtive liniment, rubbing it in well. In some of these cases it is very difficult to break up the adhesions. While there are a considerable number of

us who understand the manner and merits of this treatment, there is a considerably larger number who do not, so for their benefit I will go somewhat into the details of it.

In order to give the hot air treatment we have to have a special apparatus for the purpose. It depends upon the part of the body affected what form of cabinet you want. I have been using that manufactured by Frank S. Betz Co., of Chicago, Ill., and Hammond, Ind. There are cabinets to fit any part of the body, or all of it, but they all work on the same principle and consist of a metalic chamber lined with asbestos which closes at the lamp end with a metalic lid on the same principle as an ordinary tin box. The bottom has a heat distributing tray with asbestos top, the heat coming out through holes along its edges, the end of this tray next to the lamp having a partition attached extending upward so that when in position it cuts off the direct heat and forms a chamber in which is suspended a thermometer to gauge the heat. On the sides are suitable hooks on which lie the rods to hold a hammock of canvass on which rests the limb. The other end is closed by a canvass which encircles the limb before placing in position and when the limb is adjusted properly is put around the whole end of the cabinet and clamps it with an elastic grip. Before placing the limb in position it is made bare and then wrapped in Turkish toweling, then placed in position and the cabinet closed. The heat is furnished by a lamp which may burn alcohol, oil, or gasolene, and is adjustable so that you readily control the heat. The limb should be kept in from thirty to sixty minutes. The heat should gradually be run up to 250 or even up to 350 F., though 350 is pretty high. It depends largely on your patient, some stand it better than others, and also on the amount and quantity of the adhesions you have to contend with. If they are very extensive and firm it takes a good deal to soften them so they can be broken up. The patient often gets pretty sick and the body temperature runs up several degrees. They go into a profuse perspiration and often call for water. When they have stayed in a good while with the heat pretty high they feel pretty faint when they come out. When the patient is taken out strip the limb at once and give it a good limbering up. It is astonishing to hear these adhesions breaking up—they pop and snap like something breaking to pieces but don't lose any time in manipulating the limb; work it and bend it in every possible way and massage the muscles, using some good liniment, and preferably one with an alcoholic base, instead of an oily one. Those cases having extensive plastic adhesions are not easily cured. You have to give a vigorous treatment and keep it up. Keep your patient on some good alkaline diuretic, use the hot air treatment daily or at least every other day and massage and manipulate the limb well at each treatment and also give the limb a good massage treatment two or three times a day.

I have seen some of these cases that did not have the proper treatment go on until the whole limb became completely stiffened —I like to have said ossified. I have seen one case that the whole body was affected but the neck and head—the patient not being able to bend the body or move an arm or leg, could talk as glibly as ever, but had to be fed a mouthful at a time just like a baby. This patient suffered for 20 years—was bed-ridden for 18 years, and as helpless as a baby for 12 years.

I know another case, now living, that has a calcarious deposit in the muscles of the hands, fingers, wrists, and forearms, gradually extending upward. The flesh is a dark, dusky, glistening red, and almost as hard as bone.

These are the cases for the hot air treatment and it should be begun as early as a diagnosis can be made and kept up until all progress of the disease has vanished and the soreness gone. In this form of rheumatism we have something to fight.

Lastly, I will speak of the septic form which usually follows some germ disease and is likely to be confounded with it; and in this connection will discuss the gouty form with which it is most likely to be confounded, notably gonorrhoea. The gonorrhoea form is frequently seen. These cases always give a history of gonorrhoea, some have only had it a time or two, others may have had it a good many times. These cases have fever and enlargements of the joints and most of them, if an aggravated case, considerably enlarged and very tender and painful. This may be distinguished from the gouty form both from the history of the case and in the fact that while the joint is very much swollen and tender it lacks the calcarious deposit found in the other. I might say in passing that while any joint may be affected the ankles are most liable and next the knees. The gouty form seems to appear in the smaller joints preferably, the fingers and toes being most subject, while the gonorrhoeal form almost always attacks the larger joints. The difference in the treatment of these two forms hinges mainly on the administration of two drugs—iodides to the gonorrhoeal and colchicum to the gouty cases. Simply add these to the first prescription containing the salicylates and phytolacca rad. These cases

need a good deal of rubbing and the use of a good anodyne liniment. If there should arise any plastic adhesions I would not hesitate to use the hot air treatment. In all forms of rheumatism quiet and rest in bed during the full term of the acute stage is necessary, and is just so as long as there is pain. The diet should be very light and easily digestible and of a bland nature. Allow no acids or greasy foods.

In some of these cases of acute articular rheumatism it is well to apply ichthyol ointment or antiphlogistine or cataplasm of kaolin and envelop the joint in cotton batting and bandage carefully between treatments, as they help to relieve the pain and reduce the swelling. I also sometimes when the joints are very much swollen and the fever high envelop them in towels wrung out of ice water and keep changing as often as they get warm. The best drug I have found for reducing the temperature and at the same time relieving the pain is acetanlid. I give this to adults in from two to five grain doses every two to three hours, but nearly always combine it with quinine. When this drug is used morphine is rarely ever required.

Alcoholism*

By Wm. G. Telfair, M. D., Rochester, New York.

Gentlemen of the North Carolina Medical Society:

I am not going to deliver a temperance lecture, or take up much of your valuable time in talking about myself or my work. I wish to interest you in a subject which I think has not received sufficient consideration of the profession, and to ask your co-operation in what I have made my life work, in instructing a certain class of suffering humanity and their friends that they are afflicted with an easily curable disease, and not criminals or outcasts, but are entitled to consideration and attention from the medical profession, that there is a great deal which may be done to relieve their sufferings, that in fact most of them may be restored to health and become useful and respected members of society.

I allude to a large class of intelligent and sometimes brilliant men and women who have become diseased through the inordinate use of alcoholics and drugs, and who from a feeling of degradation and hopelessness have become besotted drunkards and drug fiends.

As a class they are sensitive and averse to being treated for this condition, feeling that it is a disgrace to seek medical aid, since to do so is an acknowledgement of weakness.

Now, since alcoholism is recognized by all scientific men the world over as a diseased condition of the nerve centres, why should we not do all in our power to help this unfortunate class? We should instruct them that their condition is one of disease, that there is no more disgrace in being treated for it than in seeking medical advice in any other diseased condition. I wish to state that most of these cases can be cured, and I make the statement after more than fifteen years experience in handling exclusively this class of cases that the results are as satisfactory as any in medicine under proper conditions. To accomplish the best results the patient must be treated in a special sanitarium for such cases, and under the constant supervision of the physician, therefore the treatment of such cases is rarely successful in general practice, and are always annoying to the general practitioner, and there are other great advantages in sanitarium treatment, the psychological effect of environment, the moral support of a number of men banded together for a common purpose, all play an important part in producing the desired results.

It is to me a deplorable fact that but few ethical or even regular physicians have entered this field; it has been left almost entirely to the ignorant or dishonest physician, and in many cases the arrant quack, there are however a few ethical and up-to-date sanitaria throughout the country which are entitled to your support, and where these cases can be intelligently and honestly treated, and I ask you to give the matter due consideration when approached upon the subject of what to do, or where to go. You could not doubt the efficacy of sanitarium treatment if you could see the bright intelligent men who I have treated at their annual meeting and banquet, with their happy wives, in the city of Rochester. A great many of the so-called cures for alcoholism do more harm than good, often turning their patients out with a pocket full of innocent looking, but deadly morphine pills, with instructions from the attending quack to take one when nervous. While in Asheville a short time ago my attention was called to a flairing advertisement in a North Carolina paper of a three day cure, and was a case of the pot calling the kettle black, in attacking another institution of the same character. accusing them of various murders and other heinous things. I asked my friend who called my attention to it who in the State of North Carolina could be caught by such stuff as that, and was astonished when told that he had known some very intelligent people to

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go there for treatment, among them two or three physicians, it appeared to me that it was a case of "fooling some of the people some of the time." Now a few words about the drug habit and I am through. I know that it is a popular belief that this condition can not be cured, and that is undoubtedly so under ordinary conditions, or even when attempted in a general hospital; existing mental conditions make it so. Opium habitues are generally deficient in the most important elements which determine moral and physical vigor. An unstable nervous system renders them abnormally sensitive to painful impressions. They are absolutely unreliable, and almost irresponsible. To effect a cure requires a special study of each case, discovery and removal of any pathological condition which may have induced the habit, absolute control, and constant observation of the patient, with unswerving vigilance of attendants until the craving for the drug has passed, and all functions have become normal, therefore it is utterly useless to attempt treatment in private practice or in the patients home, and the physician who attempts it will surely meet with disappointment. Now, gentlemen, let me thank you for your courteous attention, and if I have succeeded in interesting you even a little in this subject which has become a hobby of mine I shall feel more than repaid for my journey from my home in Rochester.

Liquor Sodii Silicatis and Some of its Surgical Uses.

By Dr. Wm. Moncure, Instructor in Orthopedic Surgery, University of North Carolina Medical Department: Assistant Surgeon Leonard Medical School (colored) Raleigh, N. C.

In the U. S. P. we find Liquor Sodii Silicatis and Liquor Potassii Silicatis and my remarks on the Soda salt are equally applicable to the Potash salt. Sodium silicate appears on the market in the form of a dry powder, the U. S. P. Liquor and various commercial grades.

The best results are to be obtained from the U. S. P. Liquor which is of a thick syrupy consistency and almost clear, while the commercial grades are more opaque. On account of the large amount of soda it contains and its strong alkaline reaction, dressings of this material should not ordinarily be applied directly to the unprotected skin surface. Under exceptional circumstances this may be done, and I have in mind a recent case in which silicate bandages remained in contact with skin surface for eight hours without producing the slightest irritation. The principle in surgery of always protecting by some elastic material the part from pressure and the danger of obstructing the circulation must be strongly emphasized in the case of silica as well as in that of other materials which become hard and unyielding.

Previous to the introduction of gypsum into surgery silica was extensively used to obtain a fixed dressing, but met with geneeral dissatisfaction. When gypsum, or more properly speaking, Plaster of Paris bandages became common knowledge its use became general to the exclusion of all other materials so that one seldom finds a silicate dressing now in practice. Even in text books on surgery mention of sodium-silicate is conspicuous through its absence. The work of Dr. Lewis A. Sayre, the father of orthopaedic surgery in this country, seems in a large measure to have been responsible for this widespread adoption of plaster as the one material for permanent dressings. And now the question naturally arises: are we justified in totally abandoning silica as an undesirable, unsatisfactory and useless surgical dressing? In answer, I may state that the object of this paper is to show that, with study and attention to a few details in the manipulation of silica, we can construct for many cases a more desirable fixed dressing than can be had from plaster. I do not mean that silica is superior in all cases, and I racognize the fact that for some, plaster has no substitute, as instanced in the correction of clubfoot, bowlegs, knockknees and many other operations that require the dressing to become fixed before the patient leaves the table, and in some stages of Potts disease.

There is no excuse for failure with plaster when we have the best grade dental plaster, crinoline with just the right amount of its sizing removed with water and subsequently dried and the bandages made fresh for each occasion: but unless these precautions are observed, there will always be failures and disappointments at the most inconvenient times. Commercial plaster is worthless for surgical purposes. The plaster bandages, as sold in the supposedly sealed cans, will at best only make heavy and uncomfortable casts if they do not fail entirely.

Sodium-Silicate has a distinct advantage here, in that the bandages—once made and put aside in glass jars—may be kept indefinitely without deteriorating in the slightest, being as useful a year or two hence as they are when freshly made. Silicate bandages, once made, are always ready for use in an emergency, without the loss of time consumed in finding the best dental plaster, crinoline and the making of the bandages. Plaster, as dispensed at present in cans poorly sealed with adhesive

strip, will always deteriorate by taking up moisture, while silica is practically unaffected. Water renders plaster useless and silica can have its water increased or decreased as necessary, without undergoing chemical change. The short time it takes the best grades of dental plaster to set necessarily causes a sacrifice of accuracy in its application. Silica hardens by evaporation and the greater length of time it takes to becomes fixed assures thoroughness and accuracy.

The length of time required for silica to dry is brought forward as a disadvantage and was the chief reason, in all probability, why it was discarded entirely. I believe this objection and difficulty can be overcome in the majority of cases.

As to the comparative weights of the two dressings the advage is decidedly on the side of Sodium-Silicate.

Another and important feature of the Silicate is its elasticity, so that, when cut, frequent removals and reapplications do not in the least disturb its shape or firmness. When a cast of silica, properly applied, is removed there is no separation of its layers, any cracks or breaks and the cut surface remains solid. Plaster casts when cut and removed separate into layers, break and in the majority of instances prove useless for further service. Should any unevenness or flaw occur in the silicate cast the addition of a little water to that part of the cast will soften it so that it may be moulded to meet the defect and allowed to dry in the desired position. Plaster once set cannot again be manipulated.

The property of the silicate dressing whereby it can be removed and re-applied as many times as desired for inspection and examination of the part confined, makes it more suitable than plaster for a large class of cases. The chief objection to the sodium-silicate dressing is the length of time it takes to harden, as it is a process of evaporation. There is always a way of overcoming this difficulty, and in my opinion after the two dressings have become fixed in the position desired the silicate is the one preferred. Let us take, for example, a case of fracture where the fragments may become disarranged while waiting a few hours for the cast to become thoroughly hard. The fragments are placed in apposition and retained by means of thin narrow strips of card-board, lightly padded and just strong enough to hold the bones in place. These coaptation splints are applied next to the primary roller of flannel and are to be removed when the cast becomes sufficiently dry to open. The various uses of silica are too numerous to go into detail with them all, therefore, I will only detail its application in the case of fracture of the leg, and name other instances where it may be used to advantage.

It is not wise to place any fracture in a cast of unyielding material until the swelling has in a large measure subsided. In all cases there should be interposed between the cast and the limb some elastic material. The fragments are placed in apposition and the limb covered with a flannel bandage. The position of the bones is now maintained by thin strips of card-board padded with a single layer of cotton. These coaptation splints, as many as necessary for each individual case, are held in place by circular strips of adhesive plaster and the remaining turns of the flannel bandage. A long thin strip of flexible metal is placed over the anterior aspect of the limb to serve the double purpose of protecting the skin when the cast is cut and also to assist as a coaptation splint. To facilitate the ease of removal the metal strip is covered with wax paper and to prevent pressure necrosis it is bent over the patella and at the instep. The limb is now ready for the silicate bandages, and as the card-board splints and metal strip are capable of maintaining the fragments in apposition without fear of misplacement, an assistant holds the limb from the table while the bandages are applied. As there is no occasion to hurry, the bandages are applied deliberately and accurately, avoiding all reverses and wrinkles. I prefer to begin above the knee and work downward, using short figure of eight turns and keeping account of the number of layers. Each turn overlaps one-half of its predecessor. The last layer overlaps three-fourths of each preceding turn and is made entirely of circular turns. The bony points have been padded very slightly, if at all, and the layers of bandage are made to follow accurately the contour of the limb. In the absence of pain or other untoward symptoms the cast is not cut until the next or even third day. Following the metal strip as a guide the cast is cut through for its full length.

There are as many cast-cutters on the market as the ingenuity of man has been able to invent, but none so good or serviceable as a strong, sharp pocket knife. A ½ inch strip is cut out directly from the front of the cast. With assistance the cast is easily sprung open and the limb removed. All uneven and rough edges are smoothed off and then faced with adhesive plaster. Two pieces of cotton cloth the length of the cast and four inches wide have a one inch hem. To this hem strong hooks are tightly sewn one inch apart. The two strips with the hooks are now covered with silicate solution and neatly applied to either side of

the cut surface of the cast so that the hooks lie exactly opposite to each other. The cast is set aside until it becomes hard. Now that the cast is dry throughout, it is ready for re-application.

The padded coaptation splints that were used to maintain the proper apposition of the fragments, while the cast was drying, are now removed leaving the flannel bandage in place. The cast is sprung open and the limb replaced in it without disturbing the bone fragments. Whatever space the splints and their pads occupied in the cast is now compensated for by the snug lacing. For average cases four layers usually suffice to give support and durability to the cast, but in very heavy patients, or where it is desirable for patients to walk in the cast, an extra layer or two is necessary.

Sometimes advantage in strength may be derived from corragated metal strips running the entire length of the cast. Again, greater elasticity may be had from semicircular springs incorporated in the cast. A cast of this description fits accurately, is not heavy or uncomfortable and can be removed and replaced as many times as desirable without altering its structure.

Another example of the usefulness of sodium-silicate is in fracture of the clavicle. The arm is put up in Velpeau position with cotton bandages, which are thoroughly coated over with sodium-silicate by means of an ordinary paint brush. This soon becomes hard, giving a firmness to the dressing that prevents any disarrangement until it is necessary to remove it.

Again, take fracture of both bones of the forearm after the ordinary anterior and posterior splints have been applied, if the whole be incased in a layer or two of silicate bandage there will not be a chance for the dressing to become misplaced, which is likely to happen with children.

With orthopaedic cases too poor to buy the best mechanical apparatus, silica can be made to serve an endless number of needs as a substitute for better and more costly appliances.

The manner of preparing silicate bandages can be described briefly. A watertight trough-shaped box to hold the silicate solution is best made from well seasoned poplar wood. This box has rounds to guide the bandage to the bottom of the trough and also a windlass attached to its top. The most suitable material for the bandages is the ordinary unbleached cotton cut in widths from two to four inches. The sodium silicate is poured into the box and the bandages made to pass through it so that they become thoroughly saturated. These prepared bandages are placed in a glass jar containing a quantity of the solution and when the jar is full the top is sealed with some of the silica, to prevent evaporation of its water. The bandages are always ready for use and keep indefinitely.

Hydrops Appendix.*

By C. M. Strong, M. D., Charlotte, N. C.

P. S., aged 35, engineer, came to me in regard to a rupture which he said only bothered him at times, then he would have pain; the mass would go away; no more trouble till it would come down again. He had worn a truss, but was anxious to get permanent relief.

On examination a peculiar condition was found; a mass, sausage-shape, size of large thumb, was found protruding through external;ring could not be replaced in abdomen,yet was not strangulated nor adherent to extring and withall did not seem to be connected with cord. It felt exactly like an encysted hydrocele of cord, yet there was marked impulse on coughing, which you know is not true of hydrocele. It was connected with the bowels. Operation advised and the next day was performed at the Mercy General Hospital. When he came on the table the tumor had disappeared. Owing to the large external ring we thought best to operate and at least close the ring. On introducing finger into abdomen after opening sack we could find this sausage mass and withdrawing it proved to be a hydropos of appendix, the proximal end being closed and projecting into the caecum full ½ inch. This was dissected out and the opening closed by inverting serous Lembert sutures, the appendix removed and the Bassini Hernia Operation performed.The appendix was a "bladder" filled with clear water; it was 5 inches long and 1 inch in diameter, resembling very much a case of hydrosalpynx, which pathologists tell us is due to a former infection in which the pus becomes sterile and all the products are absorbed or liquify and serum alone remains. Of course this can only occur in a closed sac. The patient made good recovery.

Point of interest is that hydrops appendix does occur.

Second diagnosis is made by patulous ring, sausage shaped, fluctuating mass, non adherent and marked impulse on coughing, absence of marked pain and tenderness.

Also recalls the ease of removing appendix through a hernia incision, and I believe we often have a mechanical appendicitis due to pressure of truss, and in all operations for hernia we should search for and remove the appendix when found. I have done this in last three herniotomies.

*Read before the Mecklenburg County Medical Society, June 4th, 1907.

Diagnosis and Treatment of Cancer.†

By J. Shelton Horsley, M. D., Richmond, Va., Professor of Principles of Surgery and Clinical Surgery in the Medical College of Virginia; Surgeon to Memorial Hospital,

Cancer is a subject of the broadest interest to all branches of medicine. It is constantly met with by every specialist, by the ophthalmologist, by the neurologist, by the dematologist, and by the gynecologist. But it is the general practitioner to whom the golden opportunity of an early diagnosis most frequently comes, and it is he, too, who should bear the chief burden of educating the people to come to him when cancer is in its incipiency.

Cancer is on the increase. There can be no reasonable question about that. The statistics of Dr. Roswell Park for New York State and statistics of other countries have shown that cancer is increasing by leaps and bounds. While it is unquestionably true that the diagnosis is more accurately made than it was formerly, it is equally true that even granting the greatest allowance for any such error in times past, we still have to face the fact that cancer is greatly on the increase.

We know very little more about the origin of cancer than we did one hundred years ago. This does not mean, however, that our knowledge of cancer itself has been at a standstill. On the contrary, the numerous reports of commissions on cancer research have thrown much light upon this subject, have given an impetus to the study and have resulted in the greatest care being given to the treatment of cancer with consequently a larger percentage of cures. In the hands of men who study and handle cancer and who have some pathological knowledge of tumors, the percentage of cures is greater than ever before. Formerly ninety per cent. of cancers of the breast recurred. Now we have about forty per cent. of cures. Cancer of the stomach, which practically was never cured up to twenty-five years ago, is now frequently cured. Operations on cancer of the uterus, by various German operators, have shown from thirty to sixty per cent. of cures. So all this shows that while it isn't as brilliant, for instance, as laboratory work on antitoxins which produces a serum that is comparatively without danger, yet we can say that , many cases are cured that formerly died, and that this improvement is a direct result of careful study and research work.

Though ignorant of the cause of cancer we do know this: That cancer cells themselves are the essential units; that the cancerous tumor is built of individual cells. The question is: How to kill the cells? The first point is that of diagnosis, because if you wait until the terminal stages, when the diagnosis is so palpable that even a layman can tell, nothing can be done. The earlier you make the diagnosis, the more difficult it is. It is more difficult to make it in the early than in the later stages, and it is far better for the patient. An early diagnosis, a prompt and radical operation will result in a large number of cures; but no matter how radical the operation, if the diagnosis is made late, there is but little chance for permanent cure. That is a point all of us ought to bear in mind. It is impossible for surgeons to make a cure when cases come to them in a cacheltic state, and the mortality is going to improve just as soon as the diagnosis is made early.

In the diagnosis of cancer there are a great many things to be considered. Unfortunately, there is no one thing that you can put your finger on and say, because the patient has this one symptom he or she has cancer. You must take everything together, giving the proper weight and value to each symptom. The age of the patient must be borne in mind; you must consider the hereditary history, and get the personal history in order to eliminate, on the one hand, such things as syphilis, and to draw out any hereditary history of malignancy on the other. You should pay particular attention to the occupation or habits of the patient. For instance, it is notorious that the chimney-sweeps of London are very commonly affected with cancer of the scrotum, cigar and pipe smoker with cancer of the lip or tongue, and so on. Cancer is very liable to begin at points of irritation, as the pylorus, the rectum, the cervix and the nipple. Any particular part of the body subject to constant irritation ought to be looked into.

All of these things are important, but what is more important still is one symptom, so largely overlooked, and yet so essential and upon which we cannot lay too much emphasis,—that is: *the absence of pain in cancer.* A good many patients say: "Doctor, I have a little lump here, but it has not been hurting me any." That is the most significant thing about a malignant growth. Neither a sarcoma nor a carcinoma ever gives any pain until the terminal stages unless there is some complication as, for instance, pressure on a nerve, pressure on the rectum, or something of that kind, that produces pain indirectly, but per se there is never any pain from cancer until the late stages. When a patient comes who has a nodule that has increased within the

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last two or three months without pain, the doctor should give him the most serious consideration. It may be necessary for the patient to go to a specialist,—a person who makes a study of cancer--for a definite diagnosis. If the growth proves benign, no harm has been done; the diagnosis relieves his mind; but if found malignant, the only possible chance for saving the individual will have been found out in time.

In the treatment of cancer we aim simply to destroy the cells,—the individual cells, just as in the annihilation of an army, you aim to destroy the individual soldier. If we leave any cells they are most liable to multiply very rapidly and reproduce the growth.

There is nothing mysterious about the action of chemical pastes or the X-Ray, and it is our duty to our profession on every possible occasion to educate people along this line. Cancer cells may be killed by such agents sometimes, but what will kill one cell does not necessarily kill another. The X-Ray acts by over-stimulating the cells. Take a horse out and exercise him, it strengthens him; drive him twenty-four hours, you over-exercise him and kill him. So with the X-Ray. If all the cancer cells are on the surface, the X-Ray or a paste will often cure, but if they are deep in, such agents will not kill all the cells, but will make some of them grow more rapidly, because the strength of the chemical or force of the X-Ray has been weakened by passing through the superficial cells and the resulting force is too weak to kill the deep cells, but strong enough to stimulate them.

Every single cancer, at some stage, is curable. It may not be practical in many instances to effect this, because the cancer may be inaccessible, and give no pain, so our attention is not called until a late stage. Then, too, some cancers are so malignant that removal to effect a cure would have to be done while the growth is of almost microscropic dimension,a thing that is clinically impossible.

In order to do the best work, those who are contemplating operating extensively on these tumors must themselves know cancer, and not depend upon the knowledge in some one else's head. The only kind of pathology that is of any material advantage to a surgeon is what he carries in his finger tips and in his cranium. If you don't know whether a tumor is malignant or not while you are operating, and wait two or three days to find out it will certainly be very deleterious to your patient. If you study the specimens in the laboratory and under the microscope, the next time you see a similar growth at the operating table you will recall the mental picture as it was under the microscope. A surgeon who operates very much upon cancer ought never to give up laboratory work, but should follow every tumor that he removes through the laboratory, and examine it under the microscope. You can never know too much about cancer

Operation is the only thing, so far as we know now, that will cure cancer satisfactorily, and is applicable to practically all cancers if not too advanced. The superficial ones can be cured by other means, but more easily cured by operation. I must insist, first of all, upon the knowledge of the pathologic condition. You cannot obtain this knowledge by any royal road to learning; you have simply to work for it in the laboratory;you must examine the cancers and feel them and find out how they look and feel at the operating table, and look under the microscope. This will enable you to recognize cancerous tissue, so when you operate you can remove all of it in one mass. Cancer cells are worse than pus, because they are invisible to the naked eye. These are absorbed by the lymphatics and deposited somewhere and then grow. When the operator cuts through cancerous tissue and spills millions of cancer cells on the raw surface, they are liable to be taken up by the raw surface, and cause rapid recurrence. When we take out pus sacs we know pus is very dangerous, and if we break the sac in the peritoneal cavity we can see the pus with our naked eye. It is many times more dangerous when we spill cancer cells in the breast, and it does not decrease the danger at all because we cannot see the cells. Therefore, we must use a knowledge of anatomy and a knowledge of pathology together with our ordinary surgical training and technique, and apply these things to cancer, remembering, too, that different cancers have different degrees of malignancy, and, consequently, some call for more radical operation than others. Wherever possible we must take out the whole cancer in one mass, and under no circumstances handle it more roughly than possible.

These are specimens,—a few that I had prepared, and I have brought them down, thinking they may be of interest to you. I use them in teaching the surgery of tumors to the senior class.

This is a specimen of cancer of the breast that is preserved in gelatine. Now, the gross specimen with its natural color and the microscopic slide here can be examined by the student; he has before him the natural color and appearance of the tumor while observing the microscopical appearance. I want to show you the difference between

these two cancers of the breast. This is from a colored woman, and it grew very rapidly. This is from an elderly woman, and grew rather slowly. The microscopic picture corresponds exactly to what you might expect from seeing the specimen. This has grown so rapidly the blood supply could not keep up with it, so you find it crowded with the epithelial cells and broken down in the center; but this one, of slow growth, the blood vessels keep up with, so you find a scizzhous condition with a few bunches of epithelial cells and much connective tissue, and no breaking down in the center.

This is another specimen of cancer of the breast; the cancer is fairly natural in color and of scirrhous type.

This specimen from the neck shows something I wish to demonstrate, as pointing out the method by which you can frequently extirpate cancerous growths of the cervical lymphatics. When a cancerous growth of the face is accompanied by four or five involved glands you will hardly ever save the patient by the ordinary methods. By Crile's method, however, the result is often satisfactory. After a long incision the stemomastoid is cut from the clavicle; the internal jugular doubly ligated and divided, and the common carotid artery compressed. Then the muscles, fascia, internal jugular and all tissues except the common and internal carotids and the vagus and phrenic nerves are stripped up to the jaw-bone and removed in one mass. There is the internal jugular vein. It is somewhat distorted, because it has been in the bottle sometime. It is seen imbedded in the mass of tissue consisting of the stemo-mastoid muscle and fascia of the neck.

There is one other specimen that I wish to show you, which impresses the practical side of laboratory work. The young man to whom this hand belonged came to me about a year ago. He had a slight enlargement in the thenar eminence. The hand has contracted from the formalin, but it shows the enlargement. Here is a slice cut off, which is in gelatine. He told me he had no pain, and this made me suspicious. The mass had been opened before he came to me and no pus was found. I advised immediate operation, and he consented. I put a tourniquet on and made an incision into the growth and became thoroughly convinced it was malignant sarcoma. I amputated his hand at once. The microscopic section from the specimen later showed a very large, juicy sarcoma, composed of large and small round cells. Immediate recovery was uneventful and there has been no recurrence in the stump, but a month ago (six months after the first operation) I removed a large sarcomatous mass from the axilla. There was no sign of this at the time of amputation, but I have no doubt that the original incision made before I saw the patient to let out supposed pus had turned loose sarcoma cells which had found microscopic lodgment in the axilla when I operated, though not sufficiently advanced to give symptoms then.

Tubercular Peritonitis.*

By Dr. J. F. Highsmith, Fayetteville, N. C.

Being kindly asked for a paper at this meeting to bear upon tuberculosis from a surgical standpoint, I have decided to briefly specialize with a few remarks on Tubercular Peritonitis, which I hope may elicit a free discussion and put in action further study of this phase of the disease.

Tubercular disease of bones, joints, lymphatics and other organs are daily seen by the regular practitioner and recognized, but many times tubercular disease of the peritoneum may be harder to diagnose and prompt treatment thereby delayed, and the patient go from bad to worse.

Since Spencer Wells in 1862 unintentionally operated on a patient and cured the earliest recognized tubercular peritonitis case by removing a diseased ovary, and since Konig advocated in 1844 the general resort to laparotomy in all cases of tubercular peritonitis, after he had cured three cases, there has been a very general resort to this method, and a sustained confidence in its results when applied properly.

A table collected by Osler shows that most cases occur between twenty and thirty years of age. Rotch found that in the children's Hospital of Boston the disease was extremely rare in the first months, the youngest being fourteen months old. The disease is more common in the female. According to Nothnagel 90 per cent. of the reported cases are females. A tuberculous family or one of some antecedent lesion is very noticeable. Thus in Rotch's cases there was a tubercular family history in 36 per cent. Other authors give a much larger percentage. For example—Brunn 55 per cent.; Fuller 60 per cent.; Desplans 71 per cent.

Tuberculosis of the peritoneum, briefly stated, appears in two forms, either as miliary tuberculosis or it appears as a tuberculous formation of the serosa. In the latter case the peritoneum is swollen and its forces injected; its smooth surface becomes rough and covered with numerous grayish nodules which tend to coalesce and form larger nodules. The process is usually ac-

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companied by an exudate which may be fibrinous, seropurulent, or hemorrhagic, or a combination of these different kinds.

Tuberculosis of the peritoneum is rarely a primary disease. Broschke who examined 226 cases, found only two in which there was no starting point for the disease outside of the peritoneum. The lungs was the seat of primary lesion in 200 of the 226 cases, while in the remaining cases the disease began in other serous membrane, such as the pleura or peritoneum, or in the intestines, or in the lymph glands, or bones or joints. The tubercle bacilli may reach the peritoneum through the blood vessels, or lymph vessels or by direct extension from some organ which is covered with peritoneum. The mode of entrance of the bacilli is undoubtedly various in different cases. But at any rate is invariably from tubercle bacilli gaining access to the peritoneal cavity. The route by which they reach the peritoneum is frequently difficult or impossible to determine. Any previous condition which tends to weaken the resistance of the peritoneum will act as a predisposing cause. For example, acute peritonitis, pelvic hematocele, enteric fever, and especially the puerperium.

In Konig's report of 2230 post-mortems at the Gottinger Pathological Institute there were 207 of tubercular peritonitis, of which 99 had co-existing phthisis. Eighty had ulceration of the bowels. There are still a large number where no focal deposit suggest the point of entrance, but they are scattered over the visceral, perietal and omental peritoneum. These are more numerous in children, and it has been thought probable that in these cases that milk food had been the carrier; and it did seem probable that penetration by bacilli of follicles, ulcerated or not, is the most reasonable mode of entrance. A case of Bradfords where the lad had this typical form and was known to have been fed on the milk of a tubercular cow, for some weeks previous, is in evidence. Clinically, Koch's dictum concerning bovine tubercular bacilli is not yet settled.

In America somewhat over 60 per cent. of cadavers show some form of tuberculosis, active or healed. And in Germany as high as 86 per cent. of cadavers have evidence of tubercular lesions.

In St. Mary's Hospital, Rochester, Minn., from October 1st, 1894, to October 1st, 1904, a period of ten years, there were 6480 abdominal operations performed. Of this number 5687 were intra-peritoneal and 184, or about three per cent., were some form of tuberculosis. Up to recent years, and even of late, the best clinical surgeons have held that tubercular peritonitis is incapable of spontaneous cure. It may be fairly said, however, that recognized forms of chronic peritonitis with ascites have been held to have been cured, and with the above dictum in mind, rightly have claimed, that these could not have been tubercular, else they could not have recovered. This argument in a circle now stands refuted.

Bouilivar found in extensive search of older literature eighty-two cases of tubercular peritonitis, of which twenty recovered. Vierrordt of Heidelberg, McColl, Anderson, Marfan and others, report cases treated with medicine alone and cured. From this we see that the disease has not yet been taken entirely out of the domain of medicine.

There are many theories as to the reason of the curative effects of laparotomy in tubercular peritonitis. As a rule all surgeons who have operated on these cases, and who have been fortunate in their results, are inclined to encourage others, while those who have been unfortunate will abandon the search as unworthy of special trouble.

I, myself, belong to the class of surgeons who have had a limited experience in treating peritoneal tuberculosis surgically, and the results which I have attained have been unsuccessful—no patient dying as the result of the operation, but living only a short while afterwards. Yet, I am a confirmed advocate of the surgical treatment of these cases, as it seems to me to be the most rational treatment. And I must believe that the great obstacle in the way is delay, and that my cases have been extremest, as the most of surgical cases which I am liable to encounter along that line. This holds true in appendicitis. We have that awful infection to encounter, which is a dreaded enemy and gives us untold trouble. While on the other hand if the case is not generally infected our results are all that we could ask and we rejoice with our patient in the relief that comes by active surgery.

Mrs. O., housewife, age 43, consulted me October 27, 1904. She was the mother of four children, the youngest six years old. One brother having died of pulmonary tuberculosis at the age of twenty, one sister at the age of twenty-four. The abdomen was greatly distended with fluid. On opening the abdominal cavity I removed nine quarts of hemorrhagic fluid, finding the entire paretal and intestinal peritoneum to be thickly studded with tubercles and extending on down over the ovaries and broad ligaments. The whole abdominal space was greatly distended with fluid which was mopped out and afterwards irrigated with normal salt solution. The abdomen was closed and she convalesced to all appearances satisfactorily. But four months afterwards tubercular disease showed itself in

the apex and she lost ground rapidly—dying on January 24, 1905. The fluid did not return to the abdominal cavity and the discomfort brought about by its presence was to some extent a compensation for our trouble.

January 25, 1905, Miss N., girl aged 14, white, occupation, mill-hand, was referred to me. The abdomen was greatly distended, no swelling of the feet or hands, a pinched look about the face. Looked as if though she might have an ovarian cyst, having no fever and feeling well but for this enlargement of the abdomen. On February 1st the abdomen was laid open and it was found that the entire peritoneum, the tubes and ovaries and bowels were just all matted with tubercle. We removed three gallons of fluid, washed the abdominal cavity out with the normal salt solution, and it occurred to me that it would be best to institute drainage, which I did. She ran along nicely for the first month, at the end of which time she began to have evening rises of temperature. She left the hospital on March the 15th in fair condition with regard to the abdominal organs, but as in the previous case the tubercle increased its pace of progress in the large tissues and she died from pulmonary tuberculosis in about six months. The four other cases which I have operated upon, two male and two female, making six in all, have each one ended in about the same way, no one living more than six months.

Personally, I must believe that in this I have come in contact with the most aggravated and far-gone cases where surgery was handicapped—not giving the results which were justly due it. Certainly not so if we but listen to our most noted surgeons in America and on the other side.

With this in view I addressed a personal letter to some of our greatest surgeons in this country asking them for their opinion as to the present status of surgical treatment of Peritoneal Tuberculosis, results, etc., and I have heard from them as follows:

Dr. Howard A. Kelly, of Baltimore, writes: "Tuberculosis of the Peritoneum is without doubt the most favorable of all forms of tuberculosis. The operation for tuberculosis ought always to be done as early as possible, before the extensive dissemination of the disease. It is only the advanced cases of this kind that give trouble after operation. The most dangerous cases are those that extend out into the bowels, while the most serious are those arising in the uterine tubes. I believe even where tuberculosis is extensive, the primary focus, when it exists in the uterine tubes, should be extirpated. It does not at first sight seem rational to take out the cheesy tubercular tube and leave the far more extensive tubercular area over the peritonean, but my experience has proven this to be by far the best plan. It is important in all these tubal peritoneal cases to know the condition of the uterine mucosa. I have in a number of instances found a tubercular endometrium upon curettage. In such cases the uterus tubes, and ovaries should be removed en-masse."

Dr. John B. Deaver writes: "Replying to your letter asking me for an opinion as to the present status of surgical treatment of peritoneal tuberculosis I beg to say, the consensus of opinion, of those at least who are doing abdominal work is strongly in favor of abdominal section in these cases. This is my practice. With the abdomen open if there are isolated tubercles they can be safely removed. This is done, but unfortunately it is rarely the case. It is my practice to flush with saline solution and drain them. It is the practice of some surgeons instead of irrigating to dust iodoform into the peritoneal cavity.

That a percentage of cures follow the treatment of peritoneal tuberculosis, there is no question. The percentage of cases which cures follow I am sorry I cannot give you."

Dr. William J. Mayo writes and advises the abdominal section in these cases, and that it is reasonable to suspect that tubercular peritonitis has its origin in a local focus in practically every case, as is the fact in septic peritonitis. Peritoneal reinfection may be prevented if the local focus can be removed. Whether the patient will regain and maintain general well being must depend to a large extent on whether the local focus thus removed is primary or secondary, and if secondary as to the possibility of cure of the chief seat of disease.

Dr. Robert Abbe, of New York City, writes and reports the following case, and says that he has many similar cases well, after nine years: A lady was referred to me who had been losing flesh for half a year, and who, though not aware of fever, had been having frequent night sweats and trouble in the appendix region, culminated in an acute febrile attack (temperature 103, pulse 130) and local peritonitis with a mass which I thought to be only appendicular abscesses; On operation the mass was found to be composed of caput coli, appendix, small intestines and omentum densely matted and studded with miliary tubercles, with a couple of ounces of free ascitic fluid. The appendix had to be dug out forcibly; there was no abscess but a tubercular ulcer of the mucous membrane of the appendix, which had penetrated all the coats and showed where the bacilli had made entrance.

Dr. Abbe thinks now, more than at any time in the past, that it is the imperative duty of the surgeon to freely evacuate by incision all fluid of a tuberculous peritonitis, and in all probability additional perfection will be obtained by irrigation with normal salt solution, and closure of the abdomen. Where advanced tubercular deposits can be sponged over with Camphor Napthol it is probable some additional good will accrue. The cure in undoubted tubercular cases may be absolute, though remnants of disease are apt to be latent. The purulent form of tubercular peritonitis is amenable to the same treatment. Patients in almost moribund condition with extensive ascitic form have been frequently restored to health. The power of the peritoneum to suppress a wide spread of tubercular infection cannot be doubted and its mode of action is through reparative formation, embedding the bacilli and forcing retrograde metamorphosis.

Dr. John B. Murphy, of Chicago, writes: "Under separate cover I am sending you a reprint of my article on Tubercular Peritonitis," and says that "I have not materially changed my opinion since that was written and the results attained on the plan of treatment therein outlined are very gratifying. Dr. McNortan Jones, of London, in his recent work on gynecology has made up the chapter on Tubercular Peritonitis practically from my article, and so states in his book. I merely mention this to give you an idea as to how the opinions expressed in this article are received by the medical professiou on the other side."

In review this reprint of Doctor Murphy's I find it to be quite extensive, very complete and shows itself to come from the greatest teacher in this country. He advises abdominal section in these cases, and states that the prognosis is materially influenced for good by the modern methods of aggressive surgery in Peritoneal Tuberculosis.

PHILADELPHIA, PA., Feb. 9th, 1907.

DR. J. F. HIGHSMITH,

Fayetteville, N. C.

Dear Doctor Highsmith:—

You ask me for the present status of the surgical treatment of peritoneal tuberculosis. I think that the profession in general is of the opinion that if medical treatment is not soon productive of benefit, operation must be considered; and that about thirty per cent. of the cases operated upon recover in from six months to a year. Ochsner's report before the American Surgical Association in 1902 seems to demonstrate certainly that simple incision and evacuation of fluid tend to cure. The cases most apt to be benefited are the ascitic cases, but operation will probably fail to cure when there are many adhesions. The separation of adhesions is a risky matter, because the bowel is apt to be injured; and if an opening is torn in the bowel, a fecal fistula will probably result. Yet, owing to the existence of obstruction, it may be imperatively necessary to separate adhesions; and it may even be necessary to perform an anastomosis, to relieve an obstruction.

These cases ought not to be drained, unless there is a cold abscess; but then drainage must be employed. It has been found that the use of a drainage tube is liable to be followed by a fecal fistula; and the mortality of the drained cases is greater than that of the undrained.

In a woman with tuberculous peritonitis, the incision should be median; and if tuberculous tubes are present, they should be removed. In a man, the incision should be over the appendix; and if this is found to be tuberculous, it ought to be removed. In either sex it may be necessary to remove a portion of tuberculous intestine or to perform an intestinal anastomosis.

These views as to the removal of tuberculous tubes, a tuberculous appendix, or a tuberculous area of intestine have been warmly advocated by the Mayos. You will find their article in the Journal of the American Medical Association for April 15, 1905. The operations advocated, you observe, are really radical; and in twenty-six radical tubal operations in cases of tuberculous peritonitis, they had twenty-five recoveries. Seven of these patients had been operated on previously, from one to four times, by simple laparotomy. The mortality in ordinary drainage operations is about one or two per cent.

In a very advanced case of tuberculous peritonitis, in which the temperature is decidedly elevated, or in which there are distinct and advancing tuberculous lesions in other regions, no operation is indicated except one done to relieve obstruction or to drain an abscess.

Very truly yours,

J. CHALMERS DACOSTA.

"People seem to consider a doctor's telephone as intended for public use," writes a physician in detailing the tribulations of a doctor's life in the Critic and Guide, "but the height of assurance was reached one day when a woman claimed the privilege of using my telephone to call another physician to her house."

Charlotte Medical Journal

EDWARD C. REGISTER, M. D., Editor.

No. 36 South Tryon Street, - - - -

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DR. B. F. SMITH.

From High Point comes news of the death, on July 8, 1907, of Dr. B. F. Smith in the 60th year of his age from apoplexy. For several years he practiced medicine in the neighborhood of Abbott's Creek where he was universally esteemed and enjoyed a wide practice until a few years ago when feeble health required his retiring from active work. He then moved to High Point where he lived among relatives until his death.

DR. WM. S. STRUDWICK.

We are grieved to record the death of Dr. Wm. S. Strudwick at his home in Hillsboro, N. C., July 9, 1907. For the past half century he has been one of the leading physicians of the State, and to the younger generation of physicians he was the typical old time practitioner. He was 77 years of age and is survived by several children.

MEDICAL EDUCATION IN THE UNITED STATES.

The report by Council of the A. M. A. on Medical Education in the United States made at Atlantic City, June 4-7, 1907, is worthy of careful consideration by all the members of the profession. The report summarizes the situation as follows:

(*a*) A three years' careful study has been made by the Council on Medical Education of the American Medical Association of the conditions surrounding medical education in the United States. This study included the inspection of all the schools in the United States by one or more members of the Council.

(*b*) The great advance in the sciences in recent years has created the necessity for a much broader and more thorough education, both preliminary and medical, for the physician equipped to practice modern medicine.

(*c*) The standards of the medical schools in the United States are very uneven, representing the highest and the lowest types as compared with the standards of England, France and Germany. As a whole, the standard in this country is unsatisfactory and much lower than in those countries.

(*d*) A modern medical education demands, 1, a four-year high school education; 2, a year of physics, chemistry and biology; 3, two years in well-equipped laboratories of anatomy, physiology, pathology and pharmacology; 4, two years in clinical work in dispensaries and hospitals; 5, a year as interne in a hospital.

(*e*) The expense for the equipment and maintenance of the modern medical school is greater than can be met by fees paid by medical students. Medical schools, therefore, need endowments in order to meet the demands of present day medicine.

(*f*) In the United States, until recent years, medical education was mostly in the hands of medical colleges conducted as private institutions, while in Europe it is controlled by the universities. Within recent years, however, some of the medical colleges in this country have secured university connection.

(*g*) There are still, however, a large number of schools which are conducted solely for profit, and profit is only possible where the college fails to provide proper facilities for laboratory and clinical training.

(*h*) There are 160 medical schools in the United States alone, as many or more than there are in all the countries of Europe combined. Of the 160 medical schools in the United States only about 50 per cent. are sufficiently equipped to teach modern medicine, 30 per cent. are doing poor work and need to make great improvements, while about 20 per cent. are unworthy of recognition.

(*i*) If the public realized the enormous difference that exists between well-trained modern medical service and ignorant inefficient medical service they would soon demand and obtain the needed reforms.

(*j*) A state without the protection of good medical laws, well enforced, becomes the dumping ground of the low-grade medical school with its output of illy-prepared medical men.

(*k*) To secure better conditions requires two things: Endowments for medical schools and better legislation providing state control ot medical practice and licensure.

(*l*) This country should not be satisfied with medical standards unless they are at least equal to those of other world powers which are our competitors in commerce, arts and science.

This report contains some interesting statements and it shows a movement in the right direction. That the medical schools of our country will eventually succeed in placing the standard upon the high plane advocated by the Council on Education is more than a Utopian idea. Attempts to increase preliminary requirements have been made in more than one state, but the attempts have not been uniformly successful. We must have some ideal of course toward which to direct our efforts and only the very highest is worth consideration. Yet we believe that it is a long way from realization. The very life and principles of Americanism

are so different from the conditions under which European schools exist that this alone has much to do with the present situation. The public in its stupendous ignorance looks upon any effort on the part of the profession to obtain legislation as an attempt to exclude others from its ranks, to form a monopoly, so to speak, instead of realizing or believing that pure motives could actuate those who strive to uplift and improve the profession. The Journal believes now—and reiterates what has before appeared in these columns—that the best solution of the problem, at least for those states far removed from the great teaching centers, is the establishment of legal enactment requiring the applicant for license to give evidence that he has complied with certain regulations; this requirement to be equivalent to those necessary for entrance into our State University or other reputable college. Details of our plan we need not enumerate: we merely wish to call attention to the assistance such a step would be toward elevating medical education. It would give those schools in our midst something upon which to build—a stepping stone upon which they will progress toward the realization of the ideal.

THE NORTH CAROLINA COLONY FOR EPILEPTICS

Dr. Wm. P. Spratling, Medical Superintendent of the Craig Colony for Epileptics of the State of New York, writes the Journal a letter in regard to the new North Carolina Colony for Epileptics. Dr. Spratling with his many years of successful treatment of this class of patients is well qualified to advise in this matter, and it can only be to our benefit that those who have the management of this new institution in hand consider what he has to say. We understand that a committee has been appointed to visit the various institutions of a similar character in other States for the purpose of making a study of the best methods of maintenance and treatment. Doubtless many of the suggestions embodied in this communication from Dr. Spratling already will have confronted the gentlemen composing our committee. We trust to their sagacity and wisdom to do what is best for that unfortunate class of patients for whom the State has provided so munificently.

We herewith append Dr. Spratling's letter. He says:

"Now that North Carolina is falling into line with other progressive States in making provision for the public care of dependent epileptics there are one or two points I beg to bring to the attention of the medical profession in your State that seem to me to be of paramount importance in the bearing they may possibly have on the success of the new undertaking.

"If it be true that the new institution is to be located adjoining an asylum or large State Hospital for the Insane, it seems to me that a very great mistake has been made at the outset. In the mind of the public it may be impossible in the future to separate one institution from the other, and in the minds of the friends and relatives of patients there may always be a question as to which institution the epileptic or insane person is confined in for the reason that the two institutions lying in close proximity to one another, they will in all probability have the same post office address.

"If the matter has not gone too far I would urgently advise that provision be made to locate the new Colony for Epileptics at a point some distance from any existing institution, that its individuality may be preserved in the manner it should.

"Another point is this: Many public institutions located in this country in the past have been planted on land wholly unfit for such purposes. It seems to have been the assumption generally that anything in the way of soil was good enough for a charitable institution. It is a recognized principle in the care of epileptics in this country, in England and in Continental Europe that considerable employment for the epileptic takes a very commanding position in the treatment of persons suffering from this disease. There are psycological reasons why this is true. I would advocate that the State purchase the very best land it can buy on which to found an institution where the labor of those who live in it will contribute so much towards the support of the institution.

"The Craig Colony for Epileptics, with which I have had the honor to be connected since its inception thirteen years ago, has a magnificent farm of 1900 acres. The soil on a goodly portion of this farm is five to seven feet deep. The products of the farm and the garden and the various industries, most of which are carried on 75 to 80 per cent. by patient labor, were worth in the aggregate last year $40,000. Had the State not possessed so good a farm, and had it not carried on so many industries of practical value, it would have cost the State $35 more last year to have maintained each patient cared for in the institution during the period of twelve months.

"Another error that institutions are too liable to make is in securing too small a property at the outset. Many of them secure a small tract under the plan that later on they can add more should it be desired, but when the time comes to buy adjoining lands a fictitious value out of all proportion to its worth is placed upon such lands.

"If the new institution in North Carolina proposes ultimately to care for 1000 persons all told, I would urgently advise that it procure not less than 1000 acres of land at the outset.

"Another point and I am done. Before a blow was struck in building the Craig Colony for Epileptics, a most competent landscape architect was secured and he spent four years in making a topographical map of the entire property. He planned houses, roads, walks, water and sewer lines and other features necessary for an ultimate population of 2000 to 3000 persons. That bit of preliminary work has been of immense practical value.

"During the past thirteen years we have constructed more than seventy houses, all of them being put on, or very nearly on the sites indicated by the architect at the outset. All grading that has been done has been in conformity to that plan. All roads, walks, sewer and water lines and the location of farm buildings, employee's homes, houses for industrial purposes and other features have likewise been in conformity to that plan, so I would urge the making of a complete plan at the outset before a blow is struck towards the construction of the new institution in North Carolina."

ON THE MICRO-ORGANISM ISOLATED FROM ACUTE RHEUMATISM.

In the British Medical Journal for May 25, 1907, we find the report of a series of experiments conducted by Dr. E. W. A. Walker to determine the causal organism of acute rheumatism. That acute rheumatism is an infective disease will hardly be questioned at the present day. It conforms in all respects to the type of an acute infectious fever. Its rapid onset, with pyrexia; its fairly definite course, apart from complications; it seasonal variations; its apparent endemicity in certain areas, and the occurrence of well-recognized epidemics, as shown by Newsholme, all tend to the conclusion of an infective origin. Moreover, a certain number of cases have been recorded, though they are comparatively few, in which there appeared to be evidence of transmission of infection from one individual to another. Various bacteria have been described by different observers as the causal agents of this disease. Thus, Achalme in 1891 described an anaerobic spore-bearing bacillus which he had isolated from cases of acute rheumatic fever. Beside Achalme's cases this bacillus was obtained from a number of rheumatic patients by Thiroloix, Coyon, and others, and once by Hewlett. It is, however, now generally admitted to have been an accidental finding; and it is probably identical with the *Bacillus enteritidis sporogenes* of Klein. In a certain number of cases also staphylococci have been described, but these have been for the most part isolated cases. In some of them the diagnosis of acute rheumatism appears to have been somewhat uncertain, and others of them were clearly cases of pyaemia.

Within the last decade a good deal of attention has been directed to the possible relation of streptococci, or *a* streptococcus, to acute rheumatism. More than thirty years ago, in 1874, Klebs observed cocci in the cardiac valves in rheumatic fever. Popoff, in 1887, isolated a micrococcus from the blood of a case of rheumatic fever, and found that on injection into rabbits it caused arthritis, endocarditis, and pericarditis. Following Popoff's observations, Netter, Krauss, G. Lion, and Buday have all found streptococci in rheumatic fever. In 1894 Professor Dana isolated a diplo-streptococcus from the meninges of a fatal case of acute rheumatic chorea. Riva also demonstrated streptococci in acute rheumatism. Triboulet and Coyon described a streptococcus in rheumatic lesions; and Apert and Triboulet isolated the organism from eleven cases of rheumatic fever in 1898. Lastly, in 1899, Wasserman, Westphal, and Malkoff obtained a diplo-streptococcus from a fatal case of rheumatic chorea, and found that on injection into rabbits it gave rise with constancy to a condition of acute polyarthritis.

In 1900 the subject was seriously attacked by English workers; and in that year Poynton and Paine announced that they had obtained a diplococcus in eleven successive cases of acute rheumatism—five times in pure culture. Since then they have continued their investigations with the greatest perseverance and have now isolated the organism on some twenty-nine or thirty separate occasions. Von Leyden and Fritz Meyer also claim to have shown the association of a streptococcus with acute rheumatism.

Drs. Walker and Beaton took up the work in January, 1901, and addressed themselves in the first place to the question whether they could with constancy obtain any micro-organism from rheumatic cases. As a result they isolated a streptococcus from fifteen cases, and from ten of these it was obtained in pure culture. For convenience they referred to this organism as the *micrococcus rheumaticus*. The case in favor of this organism as the probable cause of acute rheumatism in man may be summarized as follows: The organism has been isolated in pure culture from subjects of the disease, both during life and on post-mortem examination, by a succession of observers

on a relatively large number of occasions; it has been seen microscopically in rheumatic lesions—in the synovial membrane of joints, in the cardiac valves, and in the meninges in cases of acute rheumatic chorea; it was both seen in a rheumatic nodule, and cultivated from it in pure culture by Paine and Poynton; on injection into animals it produces morbid lesions similar to those of acute rheumatism. It has the appearances and general cultural characters of a streptococcus, but it produces in considerable amount an acid, formic acid, which is not known to be produced in like amount by streptococci from any other source, and this appears to afford a specific distinction.

On the other hand, various objections have been raised against the acceptance of this micro-organism as the cause of rheumatism. A considerable number of competent observers have entirely failed to find any micro-organisms in acute rheumatism. Accordingly it is suggested that the *micrococcus rheumaticus* was either a contamination, or a terminal and agonal infection, or a secondary infection. These questions can only be settled by further observations and a great number of positive results.

From the clinical standpoint acute rheumatism is a disease *sui generis*, and is, therefore, doubtless due to a single definite infective micro-organism. But before this can be regarded as in any way established probably the whole question must be reinvestigated from the beginning. First, it must be shown that the micro-organism can by suitable methods be obtained from a long series of cases, which must be chosen with due regard to their acuteness and their freedom from suspicion of complications, and secondly, it must be clearly demonstrated that the organism itself is a distinct and definite variety of streptococcus.

THE PHYSIOLOGICAL ACTION OF WHISKEY ON THE CIRCULATION.

The British Medical Journal for May 18, 1907, contains the report of a series of experiments conducted by Dr. F. J. Charteris and Dr. E. P. Cathcart to determine the action of alcohol on the circulation. In these experiments healthy men were subjected to the action of absolute alcohol, pot-still whiskey, and patent-still whiskey. The pot-still whiskey is more complex in its character, and contains secondary ethereal procucts which may conceivably alter the alcoholic action, whereas the patent-still product is a much purer substance, and is much more cheaply produced. The action was studied upon the rate of the pulse and upon the peripheral tension as measured in the brachial artery by means of Martin's modification of the Riva-Rocci sphygmomanometer, and in the digital arteries by Gartner's tonometer. The dose given corresponded to 1 oz. of absolute alcohol, and sufficient water was added to make the dilution of alcohol one in four. While no special importance was paid to the mental effect, it may be stated that as a rule this amount of alcohol produced a distinct sedative action. During the experiment the subject remained seated in a chair and was allowed neither to speak nor move. The investigations were carried out at different periods of the day, and at varying intervals after food. A sufficient number of blank experiments were done to show that under similar conditions without alcohol the alterations in pulse and pressure were almost nil. The control experiments demonstrated that the pulse shows slightly more variation than the blood pressure, but such alterations are very trifling. The normal variation having been fixed the investigators then proceeded to test with whiskey and absolute alcohol. In general terms it may be stated that the effect upon the pulse and pressure of all three alcoholic preparations, in the above dosage, is very slight, and that after the first ten minutes practically no difference can be detected. In other words, the action of whiskey on the pulse and pressure depends upon its alcoholic content and not upon any special body distilled over. In all the experiments on healthy individuals there was a slight increase in the pulse rate within the first ten minutes, followed by a fall to normal or slightly below normal. The blood pressure corresponded with the pulse—when the pulse rate increased the pressure rose, and vice versa. A number of experiments of a similar type were performed on patients suffering from pneumonia, the classical instance of a disease in which alcohol is exhibited for its stimulating action. In this condition there was a slight increase in length of action of alcohol rather than any essential difference in effect from that produced on the normal circulatory system.

The action of alcohol upon the circulation, and more especially the influence which it exerts in diseased conditions, has long been a subject of dispute. Briefly it may be stated that two views have been advanced: (1) That alcohol in suitable doses acts as a stimulant; and (2) that the action of alcohol is always depressant. The supporters of both views agree on one point, namely, that to a certain extent alcohol is burnt up in the body tissues, and thus to a limited degree acts as a food. Although these views are still under dispute, it seems from the careful investigations of recent observers that the statement regarding the depressant action of alcohol upon the highest nerve centres is probably correct. As

regards the effect of alcohol in medicinal doses on the blood pressure, it is generally held that in healthy individuals there is practically no action. The elaborate investigations of Cabot upon a large number of patients suffering from enteric fever show that any influence which alcohol exerts in this disease upon the circulation, respiration, and excretion of urea is of a very transitory nature. The same point is brought out in the recent work of Martin Kochmann. It is not meant, however, that alcohol has no action upon the circulation, as witness, for example, the cutaneous flushing which it produces. Still the general pressure is not lowered, and, therefore, there must be another effect produced in some other vascular region. To account for this apparent slight action, Meltzer has suggested that probably a constricting influence is exerted on the vessels in the area supplied by the splanchnic nerves—that is, within the abdominal cavity. Alcohol, according to this observer, does good in so far as it leads to a re-distribution of the blood in diseased conditions. In the use of alcohol in disease probably no better rule is available than the old dictum that so long as it reduces the pulse-rate, steadies the heart, and increases its tone, the drug is doing good.

THE PULSUS BISFERIENS.

Dr. Thomas Lewis contributed an article to The British Medical Journal (April 20, 1907) in which he reported the results of his observations on a number of cases of double pulse. The term "pulsus bisferiens" is now applied to a form of palpably double pulse. It is described by Broadbent as having two beats, the second of which is really a re-inforcement of a prolonged systole. It is the habit of most writers on the subject to define this type of pulse as one which is double to the finger. If this definition is accepted it follows that every individual observer will have a standard of his own, according to the delicacy of his tactile sense. It has been stated by Clarke that the pulsus bisferiens is rare. This is far from being the case. In twenty unselected cases of aortic regurgitation observed by Dr. Lewis a double-topped pulse was distinctly appreciable to the finger in thirteen cases; in three it was an obvious phenomenon, and could be seen as well as felt in the vessels of the arm and neck.

The literature dealing with the pulsus bisferiens from a clinical standpoint is scattered and unconnected. Broadbent associated it with aortic stenosis and with senile degeneration of the arteries. Steell found it in connection with aortic stenosis particularly, but did not consider it pathognomonic of that condition. He stated that a sphygmogram of an ill-developed pulsus bisferiens type is found in aortic incompetence, a conclusion in accord with Mahomed's work, and in which Lewis' observations fully concur, though they indicate the frequent presence of a well-developed type also in such conditions. Steell stated that it is usually accompanied by an ill-developed dicrotic wave, a statement which is by no means free from doubt. Both D'Espine and Mackenzie associate the double pulse with aortic conditions. So far the position is clear, and it may be said that almost all writers are agreed that this type of pulse is most frequently associated with disease of the aortic valves. It must be borne in mind that in speaking of the pulsus bisferiens, a character of the pulse rather than its general type is indicated, for there is no distinct dividing line between it and other pulse types; there are all intermediate forms. The transition to flat-topped, high-tension, and anacrotic types are those most commonly seen.

The opinion was originally expressed by Galabin, and is still adhered to in some measure by Mackenzie that the splitting of the systolic portion of the tracing into two waves is instrumental in origin; it is impossible to accept this position, on account of the palpability of the waves. Moreover, Galabin, who originally attempted to explain the deception of the finger in this respect, was eventually convinced of the double nature of the pulse by its visibility in certain cases. Another point of interest —a point which still remains unsettled—is the fact that the double beat is frequently more easily palpable, and gives a more distinctive tracing on one or other side of the body. Taking the experience of all writers, it cannot be said that it is associated with one side of the body more than with the other; its prominence on one side is of little diagnostic importance unless very marked. The view of Walter Broadbent that it depends on the arrangement of the aorta and its branches is not tenable, for, if so, it should invariably present more prominence on one side. Steell said that he had looked in vain for an anatomical explanation in fatal cases. Morrison was inclined to the view that it is due to varying longitudinal tensions developed in the vessels during the investigation. It is true that it is better shown in tracings taken with the wrist extended, but, as Broadbent has shown, it is better developed by pressure, and extension of the wrist tends to throw pad pressure on to the vascular contents rather than on to overlying tissues. Moreover, it is frequently more visible on one side of the neck than the other, and there is sometimes a marked difference in tracings from the two super-

ficial temporal arteries, where longitudinal tension can play little or no part. Again, in cases in which it occurs on one side it is often impossible to obtain it on the other by re-arranging the limb. It has been pointed out that the height of the second wave of the pulsus bisferiens depends on the degree of arterio-sclerosis present. Differences on the two sides are possibly due to differences in the expansibility of the two vessels. The association of arterio-sclerosis is so close that it is probable that in aortic cases it forms an essential factor to its appearance at the wrist.

In conclusion, there appears only one constant relationship with the pulsus bisferiens, and that a greatly dilated and hypertrophied left ventricle; there appears to be two types, the one associated, the other unassociated with arterio-sclerosis.

VACCINE TREATMENT OF TUBERCULOSIS.

In The British Medical Journal (April 13, 1907) there appeared an article by Dr. Clive Riviere entitled "The Vaccine Treatment of Tuberculosis in Children." The scientific investigations regarding tuberculin treatment, which we owe to the brilliant researches of Sir A. E. Wright and his coworkers, have placed in our hands a remedy the value of which is now assured, and which requires only the confidence of the profession to give it the recognition it so justly deserves. The results of the old empirical methods of injection have left behind a feeling of distrust which still clings persistently to the very name—tuberculin. The profession ought to realize how widely different is the treatment as at present carried out. Formerly we dosed by rule of thumb, often with unfortunate results; now, thanks to the discovery of opsonins, the dose of tuberculin, its effects, and the most suitable intervals for injection can be studied with scientific precision. This discovery has, in short, brought treatment with tuberculin, and with bacterial vaccines generally within the realm of safe therapeutics, and the clinical success that has attended the employment of that treatment has firmly established its position. Thus, though we are indebted to opsonins for the modern vaccine and tuberculin treatment, yet, be it noted, this treatment does not stand or fall with the opsonic theory, but rests on a clinical basis. At present the determination of the opsonic power of the blood remains a fairly accurate measure without which tuberculin and other vaccines cannot be intelligently or safely used; but other and less laborious methods of determining dosage may perhaps be found, and the days of the "opsonist" pass. Whether this happens or not, the therapeutic position of the vaccines (including tuberculin) is now assured; the vaccines have come to stay. The time is coming, or perhaps has come, when the practitioner who omits to suggest tuberculin in the treatment of localized tuberculosis will be open to justifiable reproach from his patient.

The opsonic index is a measure of the resistance to microbic invasion of the patient's blood serum as compared with that of a healthy individual. Thus, if the index is 0.5, the resistance is only one-half what it should be; if it is 1.2 or 1.3, it is greater than normal. The object of the tuberculin treatment is to raise the opsonic power—that is. the resistance to infection—and to maintain it at the higher level for as long a period as possible. In the case of the tubercle bacillus the index does not often rise above 1.5, and any figure at or above 1.0 is satisfactory. Immediately after injection a short rise, which may be called "pre-negative," is observed (not seen in all cases) followed immediately by a "negative phase"; this gives place later to a "positive phase," at the end of which the index again sinks. It is always safer to begin with a comparatively small dose—an average adult dose is 1-2000 mg., and fractions of this must be given to children according to their size.

It has been stated by some that tuberculin may be given safely without opsonic determination. In children this is certainly not so; even with the help of the index the dose is often difficult to fix, and individual idiosyncrasy must be considered. It is also stated that after the dose has been fixed the opsonic index may thenceforth be disregarded. Even this is not altogether safe advice, as susceptibility may increase suddenly after more than six months' treatment, so that the dose will have to be reduced to one-half and even one-third of its original strength. The result of continuing the earlier doses would be a dangerously prolonged negative phase.

The conclusions at which we have arrived are (1) that in tuberculin we have a most valuable remedy for localized tuberculosis. There is nothing dramatic in its effects, but with proper dosage a steady uphill progress occurs, both in the local conditions and in the general health. (2) That tuberculin, especially suitable for localized tuberculosis, is also of value in many cases of less localized infection, especially if nutrition be not greatly impaired. (3) That tuberculin cannot take the place of surgical procedures, but should be used in conjunction with these. (4) That the secondary infection, always present with open tuberculous lesions, generally lessens with improvement in the tuberculous process. (5)

That tuberculin treatment should only be undertaken by those who have given it special study.

President Dr. J. Howell Way has announced the appointment of the following Chairmen of Sections, session 1908, of the North Carolina State Medical Society:

Anatomy and Surgery—Dr. Joshua Tayloe, Washington.

Materia Medica and Therapeutics—Dr. L. N. Glenn, Gastonia.

Practice of Medicine—Dr. L. B. McBrayer, Asheville.

Physiology and Chemistry—Dr. Chas. A. Julian, Thomasville.

Obstetrics—Dr. Chas. T. Harper, Wilmington.

Gynaecology and Abdominal Surgery—Dr. J. F. Highsmith, Fayetteville.

Medical Jurisprudence and State Medicine—Dr. Isaac M. Taylor, Morganton.

Pathology and Microscopy—Dr. Benj. K. Hayes, Oxford.

Railway Surgery—Dr. E. T. Dickenson, Wilson.

Paediatrics—Dr. W. W. McKenzie, Salisbury.

Dr. Elias Kerner.

Dr. Elias Kerner died at the home of his son, Mr. J. F. Kerner, at Kernersville, on the morning of July 22nd, at 9 o'clock, after an illness of several months. Dr. Kerner was born February 1, 1826, and was therefore in the 82nd year of his life. He had suffered greatly recently with rheumatism of the heart, which was the immediate cause of his death. He was a successful practicing physician for more than 55 years and was a great friend to the poor, and will be greatly missed in this community. He served a term in the Legislature of North Carolina during the civil war.

The funeral services were conducted from the Moravian church by the pastor, Rev. E. S. Crossland, of Winston-Salem, after which the remains were laid to rest in the Moravian cemetery in this city.

Review of Southern Medical Literature

Southern Medicine and Surgery, May, 1907.

Some Remarks on the Materia Medica and Therapeutics of Dermatology.—Dr. J. M. King believes that the principles which govern the management of diseases of the skin in no wise differ from those which guide in the treatment of diseases of any other organs. A correct diagnosis with the etiology and pathology is demanded by the highest conception of dermatologic practice. In some diseases as eczema the naming of the disease alone is sufficient, but the stage of the disease must be recognized and treatment given accordingly. In all diseases of the skin a cure should be brought about as quickly as possible, notwithstanding the fact that it is a common belief among the laity that to quickly cure a disease of the skin is dangerous to the general health of the patient. It is regarded by the laity that a skin eruption is a manifestation of the escape of impurities from the system and the disease should not be too quickly cured. This idea is erroneous.

Both constitutional and local remedies are required in the treatment of most skin diseases. Hebra and Kapasi taught at Vienna for many years that diseases of the skin were to be treated only externally, but the French, English, and American dermatologists demonstrated the fact that constitutional as well as local treatment was demanded in many diseases. At the present time constitutional treatment is recognized by all authorities, but less stress is laid upon it by German and Vienna writers.

Arsenic has been so extensively used in the past internally for many affections of the skin that the author believes something should be said concerning its restricted use at present. It is as a rule harmful in most acute conditions and in vesicular eczema. It is usually serviceable in pemphligus and dermatitis, herpetiformis, and in certain scaly conditions, as in some chronic cases of psoriasis. It is useful in but few diseases. There is a peculiar relation not understood existing between the administration of arsenic and the conjoint occurrence of herpes zoster. This was pointed out long ago by Jonathan Hutchinson and recently confirmed in Manchester, England, in an epidemic of arsenic beer-poisoning during which many cases of herpes zoster occurred. Arsenous acid is now rarely used externally for epithetiomata, the X-Ray having practically displaced it.

Atlanta Journal-Record of Medicine, June, 1907.

The Significance of Pain in the Pelvis and Abdomen.—Dr. W. A. Crowe believes that as a diagnostic feature great stress is placed on these pains. Age is an important factor to be considered before reaching any conclusion. In a child abdominal pain suggests the possibility of lung involvement. In a person over 40 years of age and persistent we think of malignant growth. In the upper abdomen pain may be caused by involvement of the gall bladder, liver, stomach, duodenum, etc. Inflammation of the liver or its congestion may cause pain. Along with gall bladder pain may have other symptoms which have to be consider-

ed carefully before making a diagnosis. It may simulate appendicitis. Familiarity with the origin and course of the nerve supply of the organs is very important as the pains are frequently referred. Gastro-intestinal trouble may be caused by an impacted gall stone. Pain in the liver is usually referred to the back or right shoulder or is located immediately over the liver. They are nearly always limited to the upper abdomen. The pain of appendicitis is at first diffused in upper part of abdomen, later becomes localized at McBurney's point. It should always be borne in mind that the appendix may be misplaced and that the severity of the pain does not always indicate the gravity of the attack. Pains simulating chronic appendicitis may sometimes be relieved by a properly fitting suspensory bandage. The differential diagnosis between appendicitis and acute salpingitis is often difficult to make. In the former the pain extends up rather than down, while in tubal trouble it is more likely to be confined to the pelvis. The history is usually not sufficient without a digital examination and even then we may be in doubt. Here again age is important. Malignant disease is to be expected in the old, but in the young one of the common causes of pain in the lower abdomen is cystic degeneration of the ovary. Next in frequency is involvement of the tubes and prolonged ovary and perhaps pelvic peritonitis with adhesions.

Gaillard's Southern Medicine, June, 1907.

Syphilis and the Public.—Dr. B. F. Bailey says let us be men and strike where the evil lies. 1st. Let the disease be declared by every State a communicable and contagious disease and let every case be reported as such under penalty of a heavy fine for neglect on the part of the physician or patient to do so.

2nd. Let every house of prostitution be under the strictest surveilance and every diseased woman removed therefrom and placed in a State hospital provided for that purpose and there detained until she can be given a certificate of health, and during time of detention every effort made to turn her from such a life, and honest employment at living wages furnished her on leaving, even if it be State work. We owe our people the subjects of inheritance and misfortune at least this much paternalism. It is admitted that it is difficult to always detect syphilis in a woman and that surveilance has heretofore been a failure because of the appearance of disease manifestations between examinations. This we may to a great extent overcome by our third measure which has, so far as the author knows, never been tried.

3rd. Let every man who visits a house of prostitution be obliged to show to an officer of the city or county a certificate of health to have on it his own signature for purposes of identification. We know it is easier to detect the disease in man than in woman, and that man carries it from house to house and further scatters it abroad among the innocent and unwary.

4th. Let the statute prevail in every State that no license shall be issued for marriage and no marriage shall be legalized without such license until the applicants for marriage have presented a certificate of health from a legally qualified practitioner, the same being countersigned by the president or secretary of the State Board of Health, he having first examined the records of reported luetic disease in the office of the State Board of Health and verified the physician's signature as that of one legally qualified to practice medicine.

5th. The fees for all certificates under the above provisions to be fixed by statute, and evidence that any one has charged less or more for said certificates than the amount fixed by law to be a conviction of favoritism or bribery and punished by fine as a misdemeanor.

6th. That a brief and forceful exposition of the history, character, and dangers from and mode of transmission of leutic diseases be prepared and adopted by the State Board of Health of each State and a copy of the same placed in the hands of every boy and girl in the State at the age of fifteen years. That at the same time a copy of the same be placed in the hands of the parent or guardian of each child with a request for help and admonition to be extended to the child in the reading and study of the article furnished by provision of the statute. The carrying out of these efforts for the suppresion of syphilis and gonorrhoea will not remove the evil in a day, but if persisted in will in a generation eventuate in a great lessening of new cases and in two decades may lessen the State expense for caring for the incopetent enough to far more than pay for the cost of enforcing luetic statutes.

The Texas Medical News, April, 1907.

Hepatic Therapeutics.—Dr. H. Richardson looks upon cirrhosis, in which there is simply a growth of connective tissue do not long continue without affecting the liver cells, producing fatty amyloid or pigmentary degeneration, causing more or less grave derangement of cell function. During the progress of the disease they cause three modifications of function—exaggeration, diminution, and perversion. As a rule the exaggeration and perversion of

function are transitory conditions; they are represented by hypertrophic toxic cirrhosis the result of the resistance of the organ to the disease, but the overtaxed cells gradually succumb to the hyperfunction entailed and hepatic insufficiency follows; the nature of the perversion or exaggeration controlling the precise form of insufficiency which results. Hepatic insufficiency may exist without demonstrable cell alteration; more often it is symptomatic of distinct lesions, but it means that the organ is unable to fulfill its normal functions. The functions of the liver may be divided into four groups.

1. Circulatory. The liver destroys the erythrocytes, playing the part of a regulator to the composition of the blood. It holds iron in reverse, obtaining it from the destroyed cells and from the food.

2. Glycogenic. The liver forms and holds in reserve the glycogen, controlling the carbohydrate nutrition; it also controls the protied and fatty metabolic processes.

3. Antitoxic function. The liver forms urea from ammonia, forms and destroys uric acid, forms the sulphoconjugations of the phenols; it arrests and modifies toxic substances usually by oxidation, being the organ in which the most active oxidation processes occur.

4. Biliary Function. The liver forms a secretion—the bile, which may be considered both an excretion and secretion as it contains the bile salts glycocholate and taneocholate of soda, which are necessary for intestinal digestion while the bilirubin and other substances are excreted into the intestine for elimination.

Of these four groups of functions it is evident that one or more may be deficient, and to treat any case it is of importance to decide which function is deficient. Physical examination gives little or no help in the differentiation. Antemortem examination of the bile is impossible except in cases of fistula, and it is the urine and feces that we must look for the data necessary for a diagnosis. The following are the points to be examined: alimentary glycosuria, hypoazoturia ammonuria, hyperazoturia, urobilinuria, indicanuria, intermittent elimination of methylene blue, the oxidation of sulphur, the conjugate sulphates, uroerythnic and hippuric acid. The faeces should be examined for fat, bile pigments, and undigested protieds.

The Southern Clinic, June, 1907.

The Woman and the Doctor.—Dr. W. T. Maers believes that the majority of ailments in which there is an impaired function of the reproductive organs may be improved by judicious rest, exercise, dress and hygiene. Such sufferers are invariably constipated until it has become a standing joke. Calomel, cascara, and salines are the indicated remedies. Often a chalybeat tonic or remedies that exert a selective influence upon the uterus may improve matters. If there is leucorrhea or an engorged uterus depletive treatment will work wonders. A tampon soaked in glycerine and purified (white) pinus canadensis, equal parts, should be applied to the cervix on alternate nights. A saline douche should be used the next morning. This treatment heals ordinary lacerations and erosions in a short time. About twice a week the woman who suffers from the more common uterine affections should use a vaginal douche of a half gallon of very hot water to which has been added two or three ounces of the white canadensis. The astringent and antiseptic action of the fluid neutralizes offending debris and gives strength and tone to the vagina, which is a great consideration. There are very few pelvic diseases that require a major operation if we exclude those due to cancer and specific cause. Women need to be taught the value of sexual hygiene as well as correct habits and ways of living on the exterior. Her mind should not dwell upon the thought that she is a sufferer on account of some abnormality of her sexual organs. She should strive to live right and forget that she has a womb.

Nashville Journal of Medicine and Surgery, June, 1907.

The Care of the Perineum.—Dr. J. W. Brandan says that the bladder and lower bowel should be empty. The membranes should not be ruptured too early, as the pyramidal bag of waters aids in dilating the perineum. Further dilation of the perineum is done by means of the following method taught by the lamented Professor Menees: Having thoroughly cleansed the hands—as for surgical operation—the operator introduces first one, then two fingers, the tips of which reaching to the point of the coccyx the patient on her back and during the pains a firm, steady pressure downward and backward is made upon the perineum until that structure is felt to be thoroughly relaxed. The time which the dilating will occupy will depend upon the rigidity of the perineum, being naturally longer in primipara. The pressure of the right may be re-inforced by the fingers of the left, or vice versa, by placing them across near the knuckles if the perineum be very rigid, requiring heavy and prolonged pressure. The dilating should begin about the time the head is nearing the lower strait of the pelvis and continued until there is sufficient dilata-

tion or the head is almost ready to pass over the perineum when the fingers are removed; and the inner border of the palm is pressed against the perineum; the other part of the palm resting against the head, more or less pressure being applied, according as the uterine contractions are strong or weak, thus controlling the passage of the head, allowing it to pass over the perineum in the interval between pains if possible. The support to the perineum is continued until the shoulders and hips are delivered.

Maryland Medical Journal, June, 1907.

The Helpfulness of Organization.—By Dr. J. P. Remington.

The American Practitioner and News, June, 1907.

Some of the Effects of High Arterial Tension upon some of the Tissues of the Eye.—Dr. Wm. Cheatham says that we are concerned here with the early recognition of high arterial tension and particularly with the help which ocular examination can give us in this respect. The general clinician interests himself especially for the purpose of diagnosis to quote from Stengel's analysis, with a study of the pulse by palpation with the character of the first heart sound at the apex and the second sound at the aortic area with the sphygmogram and with the results obtained by instrumental measurement of arterial tension. The author believes that the examination with the opthalmoscope should be added. That this important aid has not escaped the attention of general clinicians is evident from what follows. Thus Stengel writes, "The opthalmoscope may reveal the positive evidences of vascular disease before the disease (arterio-sclerosis) has become marked. But the value of the opthalmoscope does not end here. To elucidate what is meant the author again quotes from Stengel, "If the four symptoms I have named were found in arterio-sclerosis alone the problem of diagnosis would be greatly simplified, but this is not the case. There are numerous and varied conditions of the system, organic and nervous in origin, that elevate pressure nearly constantly and in which arterio-sclerosis has no part except perhaps as a consequence. Any one of these conditions may occasion the four signs I have discussed."

So far as the author is aware the opthalmoscopic signs which are detailed in this paper are produced by no other condition except the persisting high arterial tension of arterio-sclerosis, and therefore eyeground examination is of paramount importance in the early recognition of vascular disease.

Virginia Medical Semi-Monthly, June 7th, 1907.

Scopolamine and Morphine as a Preliminary to General Anesthesia.—Dr. C. U. Collins points out the following as the advantages derived from this method: 1st. The tranquil, drowsy state of mind which it produces in the patient before the general anesthetic is administered. If it did nothing else, this should be sufficient to give it a permanent place in the anesthesias of the future. The patient feels an irresistible tendency to close his eyes and sleep. The feeling is not like the stupefying action of a drug, but is very much like the natural tendency to sleep that comes at bed time. R. H. M. Dawbarn in discussing anesthesia writes of the desirableness of anesthetizing a child while it is asleep in the following language: "It makes an astonishing difference in the amount of chloroform required whether this safest of plans (and the most neglected) is used or whether instead the frightened child is awake, struggling and screaming." By the preliminary use of scopolamine and morphine the tranquil condition of sleep is produced in any patient without regard to age with the same desirable results.

2nd. A great deal less of the general anesthetic is regained. It cannot be denied that chloroform and ether have distinct dangers, and it is probable that with the administration of a lessened amount the dangers will be correspondingly lessened. For this reason a patient is safer in the hands of an unexperienced anesthetist with the preliminary injection than without it, although an experienced anesthetist should always be obtained when possible.

3rd. Scopolamine produces a dryness of the throat which is very desirable when ether is administered because it prevents the flow of mucus usually produced by the ether and lessens the dangers of aspiration of this mucus into the respiratory tracts.

4th. The patient usually sleeps for three or four hours after the operation. The smarting, burning pain of the incision has usually ceased before the patient awakes.

5th. The post-operative vomiting is markedly lessened. About one patient in twenty will vomit several times afterwards but the remainder will be spared this painful, distressing complication.

The only disadvantage is the varying effect of the single dose on the patients. A few patients will not get the full beneficent effects of the preliminary, although all are benefited to some degree.

Principles of Surgery, Lecture XXIX, Benign Tumors Papilloma, Adenoma, Cystoma, Myxoma, Fibroma, Lipoma, Edothelioma, Chondroma, Osteoma, My-

oma, Neuroma, Treatoma and Odontoma.—By Dr. Stuart McGuire.

Virginia Medical Semi-Monthly, June 21st, 1907.

Is Gaseous Disinfection Reliable?—Dr. J. F. Armentrout says that various methods have been employed for the liberation of formaldehyde gas; but the most efficient and quickest method is obtained by the use of formalin (40 per cent. solution) and permanganate of potash and a three gallon galvanized pail—no expensive apparatus being necessary. For surface disinfection ten ounces of 40 per cent. solution of formalin and five ounces of potassium permanganate to each 1000 cubic feet of air space should be used. When penetration is necessary double these quantities of formalin and permanganate should be used. The temperature and the humidity of the air of the room should be a high percentage—e.g. temperature 80 degrees F., and air saturated with moisture, as experiments have shown that formaldehyde acts most efficiently in the presence of a high degree of heat and moisture. At low temperatures formaldehyde deposits as paraform and in the absence of moisture it is practically inert as a germicide. Having the room prepared as to temperature and humidity, clothing and fabrics spread about, valuable books standing on ends with leaves apart, water containers removed and windows and doors closed, spread on the floor about the center of the room a large sheet of paper on which put a three gallon bucket. In the bucket put the proper quantity of permanganate of potash as needle like crystals over which pour the formalin solution. In a few minutes rapid reaction takes place with evolution of formaldehyde gas, aqueous vapor, carbon dioxide, and a small amount of formic acid. Quick withdrawal from the room is rendered necessary as reaction is over in a few minutes. Six hours is ample time for keeping the room closed. The room may then be opened and aired, and it may be well to advise the removal of all clothing, pillows, bedding, mattresses and curtains to an unobstructed exposure to bright sunlight for several days, turning and beating the articles occasionally. Sunshine is a most powerful natural germicidal agent and every opportunity of securing free exposure to sunshine should be embraced. All fabrics not likely to be injured by boiling may be kept in boiling water for thirty minutes or soaked in 1-1000 bichloride solution. Woodwork and floors should be washed in 1-1000 bichloride solution before any sweeping is done. Cheap books and articles of trifling value should be burned.

Principles of Surgery, Lecture XXX, Wounds—Definition, Varieties, Pathology, Symptoms, Complications, Diagnosis, Prognosis and Treatment.—By Dr. Stuart McGuire, Richmond, Va.

The Southern Practitioner, June, 1907.

Researches in Rabies.—Dr. Wm. Litterer gives the following under the heading of diagnosis of rabies in dogs. The technique is as follows: (1) Make thin brain smears. (2) Stain with Lofflers methylene blue 25 parts; methylene alcohol 75 parts; saturated alcoholic solution, rose aniline violent 1 part; saturated alcoholic solution neutral fuchsin 1 part; distilled water 25 parts. (3) Add a few drops of water to the stain and allow to remain on for two minutes. (4) Wash and examine for Negri bodies. The whole staining process takes less than three minutes, producing just as good results as other methods which are longer and hence have a more complicated technique. The author has obtained good results from the following very simple stain recommended by von Gieson, Williams and Lowdin, viz: Methylene blue (Loffler's) 2 c.c.; distilled water 10 c.c. and saturated alcoholic solution of basic fuchsin gt. 3. By the use of such a stain a striking picture is produced. The cytoplasm of the nerve cells is stained light pink, the nuclei a light blue, neucleole a dark blue, the red blood cells a light yellow, while the Negri bodies stain a dark red. A well stained specimen will show in these "bodies" a few very small dark blue dots. They are called chromatoid granules. The method in preparing the very thin smears so essential for good results seems to destroy for the most part the cyotoplasm of the nerve cells. So in examining by this method the Negri bodies will be found scattered throughout the entire smear mostly extra-cellular, as the nerve cells have been squashed by pressure in preparing which causes the extension of the bodies. In summing up the entire paper the author makes the following statements: (1) That it is the concensus of opinion that the Negri bodies are the true etiological factor of rabies. (2) That they are living organisms belonging to a class of protozoa. (3) When found in smears or sections of the nervous system are specific of this disease. (4) These "bodies" have been found in other diseases than rabies. (5) That the smear method of examining for the Negri bodies offers us more rapid and reliable method of diagnosing hydrophobia than any other method yet published.

New Orleans Medical and Surgical Journal, June, 1907.

Shock.—Dr. F. W. Parham says that in

syncope there is not paralysis but suspension of cardiac and vaso-motor function, due to brain-anemia. Hence, lowering of head, elevation of the rest of the body, and cardiac stimulants are indicated. In collapse there is also suspension of vaso-motor and cardiac function, most frequently from copious external or internal hemorrhage; the indications, therefore, are the elevation of the extremities and trunk so as to fill the heart with blood from the veins; cardiac and vaso-motor stimulants, digitalin with nitroglycerine and strychnine to arouse the heart and send the blood to the brain all may be useful. In collapse so long as there is life there is hope. As hemorrhage is so frequently at the bottom of collapse it is all important to find and stop the hemorrhage. Failure to do this would make the stimulant treatment worse than useless, actually harmful, by increasing the hemorrhage. Having stopped the hemorrhage, stimulants, auto-infusion, hot saline infusion, recto-clysis, hypodermatoclysis, and in an extreme case blood-transfusion by the method of Carrell, which consists in connecting the artery of the donor with a vein of the patient might be tried. The patient must then be put to bed with external application of heat and given absolute rest.

It is important to bear in mind that a previous or associated shock proportionately increases the danger, for both shock and hemorrhage attack the integrity of the vaso-motor mechanism, hemorrhage by diminishing its nutrition and the causes of shock by overworking them. The older an operator the more he respects blood and the more careful he is to avoid unnecessary manipulation of sensitive organs.

If the treatment of collapse from hemorrhage be difficult how vastly more complicated is the problem of managing shock. Many cases of shock are so hopeless that once developed all measures are useless and death is inevitable. How important, therefore, to prevent it whenever we can. Here, truly, an ounce of prevention is worth a pound of cure.

"In surgical practice" says Crile "one of the most difficult problems is to estimate correctly the vital cost of executing a given technic." All the predisposing causes, age, debility from previous disease, actual presence of disease, especially of kidney or heart, diabetes, all must be taken into account in forming our estimate of the probable resisting power of the patient to surgical shock. Here blood loss is of extreme importance. The weaker the patient, from whatever cause, the more careful we must be not to attempt too much. We must not forget that shock results from the exhaustion of over-stimulation, excessive irritation of sensory nerves. We must not add to this exhaustion. There are three ways of avoiding this:

1st. Avoid unnecessary irritative manipulations, general or local.

2nd. Prevent the sending of impulses to the centers.

3rd. Render the centers less susceptible to irritation.

Texas Medical Journal, June, 1907.

Prostatic Enlargement with Some of the Causes and Complications.—By Dr. W. R. Koue, Oklahoma City, Okla.

Book Notices.

The Practice of Obstetrics. By American Authors. Edited by Charles Jewett, M. D., Professor of Obstetrics in the Long Island College Hospital, Brooklyn, N. Y. In one handsome octavo volume of 786 pages, with 445 engravings in black and colors and 36 full-page colored plates. Cloth, $5.00 net; leather, $6.00 net; half morocco, $.50 net. Lea Brothers & Co., New York and Philadelphia.

It is quite a rare occurrence in medical literature to find a work of composite authorship appearing in successive new editions. Generally the demand finished by the first issue. This fact has been the subject of some speculation, the general explanation being that a composite book, perishing in what should be its youth, fails in adaptation to its environment in one or both of two essentials: it lacks either the homogeneity or the completeness of a good book by a single author. This defect, however, is individual with the book, and not inherent in the plan. There are indeed, manifest advantages in handling a major subject by collaboration, the most conspicuous being the higher and more uniform level of authority thus attainable. Completeness without duplication is a matter of proper editing. Applying these considerations to a concrete case, it may be inferred that the demand for successive editions of Jewett's Practice of Obstetrics by American Authors indicates a well-edited work of proved high quality. Dr. Jewett and his corps of co-authors have again revised their work thoroughly to the latest date, both in text and in illustrations, in which it has always been notably rich. It is a work equally suited to the needs of obstetrician or student.

Modern Medicine. Its Theory and Practice. In Original Contributions by American and Foreign Authors. Edited by William Osler, M. D., Regius Professor of Medicine in Oxford University, England;

formerly Professor of Medicine in Johns Hopkins University, Baltimore; in the University of Pennsylvania, Philadelphia, and in McGill University, Montreal. Assisted by Thomas McCrea, M. D., Associate Professor of Medicine and Clinical Therapeutics in Johns Hopkins University, Baltimore. In seven octavo volumes of about 1,000 pages each; illustrated. Volume II, just ready. Price per volume, cloth, $6.00, net; leather, $7.00, net; half morocco, $7.50, net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1907.

The early appearance of Volume II of this great work has a practical significance for the reader, quite apart from its indication of steady progress towards completion, for it ensures that the matter is fresh from the author's pen. The first volume dealt with General Medicine and the Diseases Caused by Physical, Chemical and Organic agents, and by Parasites of the Vegetable and Animal Kingdoms, and closed with chapters on Nutrition and that most important group of disorders which arise from faulty metabolism. The second volume disposes of one-half of the great modern class known as the Infections, which is to be finished in the third volume, due in the autumn. The fourth deals with the Diseases of the Blood and Circulation; the fifth with those of the Alimentary tract; the sixth with those of the Kidneys, of the Internally-secreting Glands, those of still obscure causation, and with Muscular, Vaso-Motor and Trophic Disorders. The seventh and last volume will cover Diseases of the Nervous System and of the Mind. This very brief *resume* shows the simple classification, the judicious distribution of space, and the sustained interest of the work from beginning to end.

Reverting now to the contents of the volume in hand, Hektoen opens with an Introduction on the study of Infections, following which McCrea considers Typhoid, Typhus, and Relapsing Fever; Councilman, Smallpox and Chickenpox; Dock, Vaccination; McCollom, Scarlet Fever and Diphtheria; Ruhrah, Measles, Rubella, the Fourth Disease, Erythema Infectiosum, Whooping Cough and Mumps; Lord, Influenza; Coleman, Dengue; Koplik, Meningitis; Anders, Erysipelas; Musser and Norris, Pneumonia; Pearce, Toxæmia, Septicæmia and Pyæmia; Poynton, Rheumatism; Dunbar, Cholera; Carroll, Yellow Fever; Calvert, Plague; and Shiga, Bacillary Dysentery.

Dr. Osler's position is such that the leaders of the profession of two continents have stood ready to respond to his request to participate in the creation of this great work. His assignment of subjects shows his keen judgment of the men qualified to write with the highest authority. The resultant product will cover the whole field of medicine in its present advanced state of cultivation. It records the new level of knowledge which is open in its pages to every physician who desires the best information on any point of theory or practice.

Hare's Therapeutics. A Text-book of Practical Therapeutics, with Especial Reference to the Application of Remedial Measures to Disease and their Employment upon a Rational Basis. By Hobart Amory Hare, M. D., B. Sc., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, Physician to the Jefferson Hospital, etc. New (12th) edition, enlarged and thoroughly revised to accord with the eighth decennial revision of the U. S. Pharmacopœia. In one octavo volume of 939 pages, with 114 engravings and four colored plates. Cloth, $4.00, net; leather, $5.00, net; half morocco, $5.50, net. Lea Brothers & Co., Philadelphia and New York, 1907.

Schleif's Materia Medica and Therapeutics. A Pocket Text-book of Materia Medica, Therapeutics, Prescription Writing, Medical Latin and Medical Pharmacy. By William Schleif, Ph. G., M. D., University of Pennsylvania, Philadelphia. New (3rd) edition, 12mo. 470 pages. Cloth, $2.50, net. Lea Brothers & Co., Philadelphia and New York, 1907.

The simultaneous appearance of two books on different phases of a large subject renders it advantageous to consider them together. "Schleif" is primarily a text-book on the fundamentals, devoting most of its space to Materia Medica, Pharmacology, Prescription Writing, Medical Latin, etc. "Hare" is equally a book for students and also for practitioners. It devotes one-half of its space to remedial agents, including both drugs and non-medicinal measures as well as foods, and the remaining half to diseases and their treatment, with copious and precise directions. Both parts are alphabetically arranged and fully cross-referenced, so that all information on any point can be quickly found. The "Index of Diseases and Remedies," with its suggestive annotations, is additionally helpful in practice. Dr. Hare's faculty for perceiving the pith of a matter and presenting it clearly is reflected in all his works and is the basis of their great popularity. For instance, this is the twelfth edition of his Therapeutics in seventeen years, and of most of the editions several large printings have been required. Though it is the second edition since publication of the new

Pharmacopœia, the author has not been content with a perfunctory revision, but he has, on the contrary, scrutinized every line and made changes and improvements wherever necessary to represent his very progressive subject.

Reverting for a moment to these two books for the purpose of considering them together from the student's standpoint, it may be said that they fit into each other very advantageously. Present-day curricula divide the subject very much on the lines here followed: a course in the pure Materia Medica and annexa in the first years, and then a course on the clinical applications, or Therapeutics proper. These two books contain more information than it is possible to put conveniently into a single volume. They divide it conformably to the best practice in teaching, and together they cover the whole subject.

Thornton's Pocket Medical Formulary. New (8th) edition, revised to accord with the new U. S. Pharmacopœia. Containing about 2,000 prescriptions with indications for their use. In one leather bound volume. Price, $1.50, net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1907.

It would be difficult to mention a more frequently useful work than Thornton's Formulary. The author has arranged diseases alphabetically, and under each has given the best formulæ for simple cases, as well as for the various stages and complications, with quantities both in the ordinary and metric systems. A feature peculiar to this work, and one of obvious value, is found in the Indications and annotations for a choice between the various formulæ according to the conditions to be met. No point desirable in such a work has been overlooked. The most experienced physician will find it useful as a reminder, and his younger confrere will perform his duty better both to his patient and himself with its suggestions at hand for quick reference.

International Clinics. A Quarterly of Illustrated Clinical Lectures and especially prepared Original articles on treatment, medicine, surgery, neurology, pediatrics, obstetrics, gynecology, orthopædics, pathology, dermatology, ophthalmology, rhinology, laryngology, hygiene, and other topics of interest to students and practitioners. By leading members of the profession throughout the world. Edited by W. T. Longcope, M. D. Vol. II. Seventeenth series, 1907. J. B. Lippincott Company, Philadelphia and London.

This volume of the Clinics is quite up to the usual high standard. The articles are well selected and represent the work of authorities on both sides of the Atlantic Ocean.

A Bird's-eye View of American History. By Leon C. Prince. New York. Chas. Scribner's Sons. 1907.

A brief though comprehensive review of the annals of American history from the discovery of America by Vespucci through the many years of struggle, the birth of the nation, through the Civil War up to the present time.

Transactions of the Medical Society of Virginia. 1906. Dr. Landon B. Edwards, Richmond, Va., Secretary.

Diseases of the Digestive Organs. For Students and Practitioners of Medicine. By Owen A. Palmer, Ph. D., M. D. Published by the author, Cleveland, Ohio. Price $3.00.

The stomach is the centre of nutritive processes of all animal bodies, and any derangements of its functions are at once felt in all the structures associated with it. After 20 years of observation, the author is well qualified to speak authoritatively on the subject he has chosen, and he presents the results of his experience in so simple and practical a manner that both the student and practitioner will find it helpful. Writers have not devoted the study and investigation to diseases of digestion that they should and such a work cannot fail in its mission.

The Mayor's Wife. By Anna Katherine Green. With illustrations by Alice Barber Stephens. The Bobbs-Merrill Company, Indianapolis.

The mystery in this case centers about a sudden overwhelming terror which envelops the wife of a successful mayor who is in the middle of his campaign for governorship. An intelligent young woman is employed by the mayor to watch his wife carefully, act as her companion, and if possible to solve the secret which threatens the happiness of his home. The house in which they live is reported to be haunted, and the mayor's wife confesses she has seen a ghost. But later this proves to be a subterfuge to throw them off the track. The final explanation is quite satisfactory and rational, being free from the improbable climax which so often mars a good detective story. The illustrations are excellent and the binding of the book is very attractive.

Diseases of the Rectum. Their Consequences and Non-surgical Treatment. W. C. Brinkerhoff, M. D. Price $2.00. Orban Publishing Co. Chicago. 1907.

A lengthy discussion of a special method of treatment of hemorrhoids with reports of cases. The work contains a good deal of valuable information and many useful practical suggestions.

Diseases of Metabolism and Nutrition. By Prof. Dr. Carl Von Noorden. Part V. Concerning the effects of saline waters on metabolism. New York. E. B. Treat & Co. 1904.

This little volume is an English translation under the direction of Dr. Boardman Reed, of Philadelphia, of a thesis on the investigations carried out by Prof. Von Noorden and Dr. Carl Dapper on the effect of the saline waters (Kissinger, Hamburg) on metabolism. Since the observations were made on actual patients the results are somewhat different and manifestly more reliable than experiments carried out on animals and healthy men.

Races and Immigrants in America. By Jno. R. Commons, Professor of Political Economy, University of Wisconsin. New York: The Macmillan Co. London: Macmillan & Co., Ltd. 1907.

Prof. Commons has given the thoughtful reader a work of more than ordinary value. He discusses the various races which have contributed to the make-up of American citizenship and traces the effect of the influx of various elements upon the social conditions of the country. The book is written in a very attractive style and is well illustrated. As a clear, concise treatment of the subject there has appeared no superior to this little volume.

The Cruise of the Shining Light. By Norman Duncan, author of "Dr. Luke of the Labrador." Harper and Bros., New York. Price, $.150.

A story of mystery, of love, of quaint humor and vigorous action. It is a story full of real characters that will live—the boy Dannie, about whom there is a veil of mystery, and in whose love story the book ends—and the old man, Nick Top, who brings Dannie up to wear fine clothes and to be a gentleman after the rules of Lord Chesterfield—and a girl, Judith of Whisper Cove, whom Dannie loves from childhood. It is a novel that holds one as the great old-time novels hold.

Absurdity of War Talk.

War in modern times presupposes some fundamental dispute or antagonism that cannot be dealt with by diplomacy or arbitration. Furthermore, war is usually attended by deep feeling on both sides. But it so happens that there does not now exist, nor has there ever existed, any cause of war whatsoever between Japan and the United States. Nor is there any war-like feeling in this country against Japan. On the part of the public men and influential people of Japan, furthermore, there is no war-like feeling toward the United States. Neither is there any question of interest involved, such as leads nations sometimes to find pretext for war because of some conquest or acquisition they desire to make. Japan possesses nothing that we could acquire or could possibly wish to gain. We, on the other hand, have nothing that Japan could hope to gain and hold with benefit to herself, as the result even of a successful campaign.—From "The Progress of the World," in the *American Review of Reviews for* August.

French Economic Troubles.

If the general struggle for economic benefits is at the basis of our social and political controversies in this country, the same thing is to be observed abroad. The critical situation in France last month was due to no political sentiment or governmental theory, but purely to a practical business condition. The south of France depends very largely upon the wine product. Not only are the hillsides planted in vineyards, but broad valleys of level land which one would expect to find devoted to grass, wheat, and other cereals are devoted to vines and nothing else. The destruction many years ago of the French vineyards by the philoxera was a terrible blow to the farmers of that thrifty country. Thanks to the successful importation of American vines, the production of grapes has not only been restored, but greatly increased in extent and quantity. Overproduction, and changes in the conditions of demand and supply, have brought the price of their crop so low that it is now produced at a sheer loss. The grape producers believe that this condition is due to the adulteration of wines, and to other causes that the government can remedy. Hence a tremendous uprising of the peasantry and of the people in the towns and cities who are dependent upon the wine industry as their principal trade, with a resulting situation upon which further comment will be found on a subsequent page. The real remedy, of course, lies in the larger cultivation of other crops. But the situation, meanwhile, illustrates the fact that all governments are now compelled to give their principal attention to problems that concern the economic condition of the masses of the people, who are determined to allow no conditions that law and government can remedy to stand in the way of their increasing prosperity.—From "The Progress of the World," in the *American Monthly Review of Reviews* for July.

Abstracts of the Leading articles of the month.

A New Tuberculin Reaction.—Pirquet (Muench. med. Wochenschr.) at a meeting of the Berlin Medical Society, announced a new method of using tuberculin for diagnostic purposes. He was led to his method by an observation made in connection with cow-pox vaccination. It is generally held that re-vaccination, within a few years after the primary vaccination, is unaccompanied by any reaction. This, he holds, is not quite true and is based upon the fact that the site of re-vaccination is not inspected until a week or more has elapsed. If, however, the little lesion is examined within 24 hours, a slight reaction will always be visible. It takes the form of the production of a small papule; this he believes to be a specific antibody reaction and to indicate with certainty that the organism has once before been infected with cow-pox vaccine and therefore contains cow-pox antibodies.

He follows a similar procedure with tuberculin. A few drops of the fluid are placed upon the skin and the latter slightly scarified so that some of the tuberculin will be absorbed. If the patient is tuberculous or has ever been so, his blood will contain tuberculosis antibodies and he will react to the tuberculin by means of the production of a small papule at the site of vaccination. The older the patient, the less significant the reaction, since nearly every one has been tuberculous at some time. The most valuable results diagnostically should be obtained in children. He has found the reaction positive in all cases of tuberculosis in children except where there was miliary tuberculosis, tuberculous meningitis, or extreme cachexia. The most striking reactions were obtained in local infections, bone tuberculosis and scrofula.

Two objections to this method would seem to lie on the surface. Papules do sometimes occur after local irritation of the skin, without being the expression of a general reaction. Moreover, there is no way of controlling the amount of tuberculin absorbed by the scarified surface, so that the method might well be not entirely free from danger.

Future Results in Cancer of Stomach.—Hoffmann (Mitt. a. d. Grenzgeb. Med. u. Chir. Gedenkband f. Mikulicz) asks the question: Are we to expect better results in the future from the surgical treatment of stomach cancer, and is there a definite relation between the clinical duration of the disease and its operability? To decide these points the 655 cases in Mikulicz clinic were studied. Many more men than women were observed (410 to 239), but the resected cases were about equally divided (87 men to 77 women). This is explained by the fact that enteroptosis and relaxed abdominal walls are most often observed in women, making the tumor evident to examination when still small, and these are the most favorable cases for the radical operation. Out of the 163 cases of resection of the pylorus 21 were free from recurrence after two yeafs. In many cases it was possible definitely to establish the beginning of the trouble, in others not so easy until the operative findings were consulted. But in considering the facts it was shown that only 18 per cent. of the cases consulted the clinic in the first 3 months of their illness, about 50 per cent. in the first 6 months and only 83 per cent. came to surgical treatment in the first year of their illness (an average of 10.3 months for all cases), a very late stage of the disease for satisfactory surgical care. About 4 per cent. of the cases showed a tumor at the time of the first symptom. The great inadequacy of methods of stomach examination and the great danger of delay make it imperative that all doubtful cases be immediately sent by the general practitioner to a stomach specialist or to a surgeon. No doctor can say whether the tumor is or is not operable, and all doubtful cases should be given the advantage of an exploratory laparotomy. He shows that the average time from the appearance of the disease to the time of operation for cases whose pylorus was resected in 9.5 months, while the time of the non-radical operations was 11.2, a difference of 2 months in which the cases have passed over the stage of operability. The author concludes that we have little to expect from improved technique or improvement in the methods of stomach examination. The cases will seek a surgeon earlier only by a more thorough instruction of the general practitioner and the laity that salvation lies in seeking surgical aid early. There is a definite relationship between duration of the disease and its operability.

Ichthyol as a Pain Dispeller.—Hirschkron (Deut. Aerzte-Zeitung) writes from his experience of 16 years of the value of ichthyol in relieving pain, and upon the widely varied usefulness of the remedy. Applied externally, it has proved an excellent treatment for all cases of rheumatism. In such cases, a lukewarm 10 per cent. solution of ichthyol-glycerin is used to moisten a gauze dressing for the affected part of the body, and a hot-water bag is also applied if heat is desired. In the form of salve, ichthyol, with a small addition of menthol, acts with magical results; the foundation of the salve should be of equal parts of vaselir

and wool-fat, 6 per cent. of ichthyol and 1 per cent. of menthol being added. For patients who cannot bear heat, ichthyol is applied in glycerin salve form, protected by a compress. Such an application is especially effective in cases of painful swelling, which it will often reduce over-night. It is also recommended in gonorrheal rheumatism for the swellings in the large and small joints.

Added to the bath, ichthyol gives good results in the treatment of neuralgia, particularly neuralgia of the back. To a full bathtub, add two ounces of ichthyol for instant relief from pain. The value of a salt-water bath is heightened by a previous use of ichthyol on the affected part.

In its original use as a remedy for every form of skin disease, the author claims that ichthyol still remains unrivalled.

Given internally, ichthyol is equally effective in allaying pain. In the form of pills, capsules, or diluted with water, it affords immediate relief in chronic catarrh of the stomach, does away with the pain attending the process of digestion, and relieves the painful accumulation of gases so common in stomach and intestinal troubles. Ichthyol is also a valuable remedy in cases of asthma, tuberculosis, hemorrhage, etc.

The writer concludes:

"It is well known that for several years past various substitutes for ichthyol have been placed upon the market. As these are always as costly as ichthyol, and should, therefore, be just as good, I have sometimes tried them in my practice; but I have always gone back to ichthyol, for I do not find these other preparations so effective and reliable, and besides, they seem to vary in strength."

Nervous Rhinitis (Rhinitis Vasomotoria Nervosa).—Kuttner (Nasal Reflexes and Neuroses) believes this disease consists in a reflex neuroses, the sensory stimulation originating in some organ other than the nose, to which it is transmitted by way of reflex. It is usually made to include a number of pathological conditions related through their more or less close resemblance to true rhinitis. The disease rarely presents the typical familiar picture of genuine coryza; only some of its symptoms being present as a rule, such as swelling of the mucosa, increased secretion, attacks of sneezing, etc., either separate or in combination. Other cases are characterized by an excessive severity of certain phenomena of the symptom complex, or by a combination with processes not generally associated with ordinary coryza. Whereas, however, certain clinical resemblances exist with the picture of acute rhinitis, there is a marked contrast as to the etiological factors in these two forms of rhinitis. Genuine coryza is an infectious disease, but nervous coryza is a reflex neurosis, which has nothing in common with infectious agents. A great variety of causes may enter into consideration for the determination of this reflex process; of a mechanical, chemical, thermic, psychic, or sensory character. The point of irritation may be located in the digestive or genito-urinary tract, at the surface of the body, or elsewhere, but the immediate cause of nervous rhinitis is never referable to infection.

The foundation of the disease consists in a neuropathic change, which is usually designated as an idiosyncrasy or predisposition, as it is frequently manifested only by increased reaction to certain specific irritants. The pathological picture manifests itself in its various forms through this predisposition in conjunction with the preparatory and the determining factors. The number of accidental causes, which here enter into consideration, is very great. Sudden cooling of the body surface is the most common cause, being especially dangerous when due to draughts, striking only circumscribed portions of the skin. In different patients, either the back, the chest, or the feet may be particularly sensitive. (A thorough wetting is more apt to lead to genuine than to nervous coryza). Severe attacks are sometimes determined by the contrast between the warm air of the bed and the cooler air of the room, when the patient first sits up in the morning. In many cases, the hot dry air of concert halls and theatres, restaurants, and social gatherings, etc., has a very unfavorable effect. A number of patients are very susceptible to tobacco smoke and various forms of dust. One of the author's patients, who was used to all kinds of weather, had a copious discharge from the nose, whenever he inclined his head slightly forward. The existence of a nervous rhinitis rather than the evacuation of a cyst, the discharge of cerebrospinal fluid, or similar conditions, was positively shown by the fact that the characteristic nasal discharge was likewise provoked by any form of psychic excitement, tobacco smoke, and a number of other injurious agents. In a similar manner, certain individuals are affected by psychic excitement, by sexual stimulants, diseases in the area of the digestive tract, and other injurious agents.

Epilepsy in Childhood.—Keeling (Brit. Jour. Chil. Dis.) considers epilepsy in childhood as related to other diseases in the following aspects: Pathological, etiological, familial, symptomatic. His study was based

on an analysis of 150 cases and his conclusions are as follows:

The pathology of epilepsy appears to resemble in some respects that of cerebral diplegia, chorea, paralysis agitans, neurasthenia, myoclonus and migraine.

Etiologically, rickets is an important factor in the causation of epilepsy.

A variety of epilepsy, which may be termed toxic epilepsy, is chiefly gastro-intestinal in origin.

Reflex epilepsy is apparently rare; peripheral irritation probably plays a very small part in the production of the fits.

The effect of measles on epilepsy is uncertain.

Chorea is very rarely found associated with epilepsy.

Infantile paralyses, especially the congenital forms, are closely related to epilepsy.

An injury or a fright is frequently the exciting cause of a fit. Instrumental delivery may be followed by paresis with subsequent epilepsy.

Enuresis is an occasional sequela of epilepsy.

The disease known as "night terrors" is probably a mild form of epilepsy.

The three affections most frequently found in the family history of epileptics are epilepsy, migraine and alcoholism.

Migraine appears to be very closely allied to epilepsy, both in the family history and symptomatically.

The differential diagnosis between Meniere's disease and epilepsy is occasionally difficult.

Treatment of Acute Otitis Media.—Peterkin (Lancet) discusses at length the treatment of acute otitis media. He remarks on its very common occurrence and on its being almost always the forerunner of the chronic suppurating condition, which is a menace to the efficiency and safety of the sufferer. The frequency of this chronic suppuration is due to the fact that physicians do not see a large number of the acute cases until too late, but also many physicians do not treat them as the serious condition which they undoubtedly are. The treatment of acute otitis media is divided into two stages—that before and that after perforation of the tympanic membrane. During the acute stage the relief of pain is the most urgent requirement of treatment; for this one of the best remedies is a solution of carbolic acid in glycerin, 10 or 20 grs. to the half ounce, with or without the addition of 10 grs. of cocaine hydrochloride. A few drops of this solution warmed and instilled into the ear every hour or two generally brings relief. Where it fails ear baths might be used. This consists in filling the meatus with hot boric acid solution and allowing it to remain for a few minutes, repeated every hour or two and in the intervals hot boric fomentations are applied over the ear. Poultices are unhesitatingly condemned on account of their tendency to encourage sloughing.

As internal remedies, particularly where the temperature is raised, an analgesic antipyretic is frequently useful and an opiate will probably be necessary in the evening. If those remedies fail there still remains free incision, not puncture, of the membrane. This very rarely fails to give relief. It relieves pain by relieving pressure, allowing the discharge to escape, and is the best site for bleeding. In the milder cases a vertical incision in the posterior inferior quadrant is sufficient, but in the more severe cases the incision ought to be carried up the whole extent of the drum and on to the posterior superior wall of the meatus. Incision ought to be done if the preliminary treatment does not give relief in twenty-four hours. When, however, there are indications for an earlier incision it ought not to be postponed. Such indications are a bulging membrane, high temperature, vomiting, convulsions, or any signs of cerebral irritation, and also any marked mastoid tenderness. The drum ought also to be incised at once in otitis media occurring in the course of the zymotics. The most useful local anesthetic is one composed of equal parts of menthol, cocaine hydrochloride, and carbolic acid. After the membrane has ruptured or been incised, treatment must be directed to the promotion of drainage from the middle ear. Frequent syringing with a warm, mild antiseptic such as boric acid is enough to bring about healing, but if discharge continues after some days of this treatment, peroxide of hydrogen might be used. This is best done before syringing so as to prevent irritation of the meatus. In the few cases where even this is not enough to effect a cure, boric spirit drops, used after syringing, will frequently benefit the case. This is only to be used after all signs of acuteness have disappeared. It is advisable in using these drops to practice tragal massage until the spirit is felt in the throat. The insufflation of boric powder is not good as routine treatment. It might lead to the blocking up of discharge and even cause mastoid abscess. As to mechanical aids to drainage, middle-ear inflation ought not to be done while there is much pain, but although there is considerable diversity of opinion as to its use after pain has ceased the author advocates its use.

The application of suction to the middle ear is another mechanical method of treatment which is complementary to inflation

but does not replace it. The treatment of any lesion of the throat and nose is of the utmost importance and where it is non-operative it ought to be undertaken at once. Operative treatment, such as the removal of adenoids, ought to be undertaken as soon as the temperature has become normal; it ought not to be put off until the otitis is cured. If discharge still continues from the ear, and as the patient might not know whether the ear is discharging or not, the physician ought to see to it personally, and at the end of six weeks the mastoid antrum ought to be opened. It is a mistake to wait for the classical symptoms of mastoid disease, as the patient might be very deaf before these appear.

Painful Peritoneal Adhesions.—Violet (Gaz. des Hop.) says that pelvic peritoneal adhesions left after an old peritonitis may constitute alone an infection that will bring the patient to the physician. There may result occlusion of the intestine, acute or chronic, digestive troubles, or simply attacks of pain. There is often so little relation between the subjective conditions and the findings upon abdominal examination that the patient is treated as a neuropath. These results may come after a violent attack of peritonitis, of which the patient will give a history, or there may not be any remembrance of the attack, so slight was it and so gradual has been the appearance of the symptoms. The author's case presented intestinal occlusion, with such severe abdominal pains as to incapacitate the patient for work, yet she had no remembrance of the slight attack of peritonitis, due to a blow on the abdomen, that had been the starting point of the whole process. There were marked adhesions to the omentum over the front of the abdomen, and bridges of tissue which compressed the sigmoid flexure and produced partial occlusion. The patient had been treated for neurosis. After the liberation of the adhesions she found herself entirely restored to health and able to do hard work. The results of these adhesions may be divided into three groups: Pain and functional disorders; intestinal strangulation; affections which present all the characteristics of some abdominal disease. There may have been an acute peritonitis of the intestinal tract, entirely cured and leaving behind only adhesions. There may have been tubercular peritonitis of low degree evolving a fibrous condition and recovering entirely, with the exception of the adhesions. These adhesions become painful when they interfere with the intestinal circulation, simulating painful intestinal contractions. There may be adhesions about an ovarian tumor. There are always adhesions about large umbilical or inguinal herniæ. The peritoneum and abdominal organs are among the most insensible in the body. The pain caused by intestinal peritonitis is due to rubbing of the intestine against the abdominal walls; but when the peritoneum is inflamed the excitability becomes marked and much pain results. Distention and stretching of old adhesions or twisting of the contained organs will cause pain. Menstrual congestion also causes sensitiveness. Treatment is separation of the adhesions and prevention of their recurrence.

The Character and Treatment of Membranous Enteritis (Colica Mucosa).—Albu (Therapie der Gegenwart) says the designation "membranous enteritis" as a rule includes two different diseased conditions, namely, membranous colitis in the restricted sense and so-called colica mucosa. Both these pathological conditions have in common the chronic obstipation and discharge of tubular masses of mucus, but colica mucosa presents another symptom which is absent in true membranous enteritis, namely, the appearance of intermittent abdominal colics. The pathogenesis of the two affections likewise has a very important distinction, membranous enteritis being, as a rule, caused by atony of the large intestine, whereas colica mucosa is due to tonic spasms of the bowel wall. The latter disease accordingly constitutes an irritative neurosis of the bowel, based upon a primary purely nervous spasm of the colon.

The treatment must, therefore, vary with the condition present. Colica mucosa requires, in the first place, the control of the intestinal spasms. This is accomplished by:

1. Application of warmth, in shape of hot compresses (linseed poultices, hot plates or bottles, etc.) and hot half or full baths.

2. Narcotics, in shape of suppositories and belladonna (0.01 to 0.02 pro dose), to which may be added the same amount of codein. The author objects to the use of opium in any of its preparations, because its sedative value is offset by the occurrence of intestinal paralysis under its prolonged employment, resulting in increase of the existing constipation and in aggravation of the intestinal weakness. Morphine is indicated only in the presence of severe paroxysms.

Attention must be chiefly directed towards the removal of the tonic contractions of the bowel. These indications are met with by:

1. Prolonged half or full baths, warm, lasting from 20 to 25 minutes, three times weekly.

2. Warm enemata with oil (one-half to

one pint linseed oil, etc.), or oil mixed with soapy water, to be introduced very slowly and under low pressure, to remain for a long time.

3. For nutrition, a milk and vegetable diet, in form of porridges, meaning the exclusion of all husks, shells and cellulose constituents in general. The vegetables are, therefore, to be served "mashed" and the fruit in shape of "jams." The food must be very carefully prepared, so as to avoid the irritation of the bowel wall caused by indigestible vegetable constituents, which results in contraction. At the same time, the food should be bulky, so as to advance of its own accord, maintaining the bowel in constant gentle motion. The internal administration of the bromides and other nerve tonics is useless. Permanent results in the treatment of neurasthenia can be looked for only from physico-dietetic methods.

The treatment of membranous colitis is not the same. The atony of the bowel is here best improved and relieved by the following measures:

1. Careful massage of the large intestine with the hand or a vibratory apparatus, preferably when the bowel is empty.

2. Faradization of the large intestine in frequent brief shocks (in relaxation of the abdominal coverings).

3. A more or less coarse vegetable diet, under simultaneous use of buttermilk, kefir, honey, jams, dried fruit, grapes, gingerbread, graham bread, milk sugar, etc.

4. Glycerine enemata and suppositories; cold water enemata.

The employment of astringent injections is strictly contraindicated in either of these conditions, because they serve to increase the irritation of the bowel, and with it the formation of mucus. Moreover, they actually provoke intestinal contractions. On the other hand, it is advisable to remove the mucous membranes by regular lukewarm injections of sodawater or oil enemata. In case of failure, a mild laxative, such as castor oil, may be administered. The longer the mucous membranes are permitted to remain in the bowel the greater is the danger of the appearance of colics.

The Seroreaction of Syphilis.—Levaditi (La Presse Med.) means by the seroreaction of syphilis a biological reaction analogous to seroagglutination permitting the recognition of the syphilitic antibodies. In man and monkeys the virus of syphilis exists in cutaneous or visceral lesions, in the blood and the affected organs in the form of the organisms discovered by Schaudinn and Hoffmann. They also contain the products of these organisms, and there are developed specific antibodies in the tissues. The seroreaction permits us to recognize the presence of infection in old cases when we cannot find the micro-organisms themselves. The method of Bordet and Genou is to be applied to these researches in the blood, lymph, and cerebro-spinal fluid. Absence of hemolysis indicates the fixation of the complements by the antibodies. The antibodies cannot be found by any observers in the blood of individuals not infected with syphilis, but they can be found in the great number of syphilitic persons in the blood and tissues. The antibodies have also been found in the blood of infants affected with heredo-syphilis, in the placenta of these infants, in the primary and secondary lesions, in infected lymphatic glands, condylomata, gummata, and serpigenous ulcers. In monkeys one-half of the organs contain them. The antibodies of syphilis have been found in the cerebro-spinal fluids of tabetics and general paralytics. The mononuclear leukocytes take an active part in the formation of these antibodies. These observations may lead to very precious results concerning the distribution of the syphilitic virus in the infected organs, the variations of their condition in different tissues, and their preservation for varying lengths of time in different cases. They may aid in diagnosis of latent syphilis and the knowledge of definite cure of old cases. But the method now in use is too slow and complicated to be used for diagnosis at the bedside.

Primary Cancer of the Vagina and Its Operative Treatment.—Jacob (Zent. f. Gyn.) says that this affection is comparatively rare and occurs in general after the menopause. This rarity is due to the small number of glands in the vaginal walls and the small amount of vascular tissues, as well as the ease of regeneration of the vaginal epithelium. There is much difference of opinion as to its operative treatment. It usually occurs in multiparæ. It may be diffuse in form, or begin with small circumscribed nodules, which become crater-form ulcers. It generally occurs on the posterior vaginal wall, which is most exposed to irritation and erosion, and in the upper third. It is one of the most malignant types of growth, quickly involving the underlying connective tissue and the neighboring organs. This rapid involvement depends on the small amount of muscular tissue in its walls and on the lymphatic connections, which go to the broad ligaments and the rectum. From the vaginal wall the cancer soon passes to the cervix by the lymphatic glands as well as by implantation of cancer particles. The prognosis is very bad and recurrence frequent. Treatment can only be by operation, and there are several meth-

ods of approach: by vagina, by the perineum, and by the sacrum. The uterus must be extirpated at once, on account of the facility of recurrence in it, as well as the possibility of hematometra or hydrometra if it is left behind. The author describes the operation in two typical cases of vaginal cancer in women forty-four and fifty-seven years of age. He used the perineal operation, by which, although the operation is long, the cancer is kept entirely outside the wound, lessening the danger of implantation; bleeding is not very great; there is room for the operation; extirpation of the uterus is easy, and there is enough material left to make a useful vagina in married women.

The Influenza Knee.—An important contribution to the literature of rheumatoid diseases is made by Franke (Deutsche Zeitschrift fur Chirurgie, who discusses at length the articular lesions caused by the influenzal virus.

These articular conditions are most often seen in those chronic afebrile states which follow acute attacks of influenza, and which are due to the continued presence of the bacillus in the tissues. These chronic infections may be recognized by a tendency to chilliness and sensitiveness to exposure, with liability to "colds." The throat is characteristic; the anterior pillars and edge of the palate are red, while the vault of the pharynx and the tonsils are not affected. The tongue shows large red papillæ on a grayish coating. There is often a sense of constriction which may even resemble the sensation of croup. The color of the skin is grayish, unlike that of other anemias. The spleen is found enlarged and the heart is irregular or nervous. The influenza bacillus is isolated with the greatest difficulty, but had been found years after acute infection. There are often harsh sounds at the apices of the lungs.

The articular changes are also absolutely characteristic. The knee and small joints of the fingers are most often affected. The bone is inflamed, and in the fingers the paraarticular structures also. The tenderness of the knee is particularly noticeable on the inner condyle—not over a nerve or where any pressure comes on the cartilage. This location is diagnostic. The pain is dull, but it causes a considerable amount of disability. The onset is slow, and there is little or no tendency to permanent stiffness or suppuration. The knee-jerks are increased, although other reflexes are normal. The cases in which pathologic study could be made showed an osteitis with softening immediately below the cartilage. The treatment consists in putting the joint at rest as far as possible, and especially the avoidance of all sudden strains. Heat externally may relieve the pain, and sodium salicylate with antipyrin is of benefit in most cases, especially in those with enlarged spleen. Potassium iodide and various other anti-rheumatics are of no value. If possible, rest in bed should be required.

Cerebral Embolism in Post-Diphtheritic Cardiac Weakness.—Escherich (Wiener Med. Wchschrft) assumes that in two cases under his recent observation thrombosis developed as the result of cardiac weakness, being followed by embolism of cerebral vessels. The first patient was a child two years of age, who was admitted to the hospital in a condition of severe collapse, with paralysis of the right half of the body. On the next following day the lower extremities were held in rigid extension, with some slight motions of the right arm. Consciousness was apparently preserved. One day later the patient presented a livid discoloration, with analgesia of the legs. Reaction to painful stimuli could be elicited only in the upper third of the thighs, the right leg being observed to present a spastic paralysis. The eyes were deviated towards the left. The patient died during the night, and the autopsy showed the presence of embolism of the left median cerebral artery, with recent white softening of the left cerebral hemisphere.

The second patient was a child nine years of age, who three weeks after a severe attack of diphtheria presented total paralysis of the palatine velum and of the accommodation. There was a very sudden apoplectic seizure, with general convulsions. The four extremities are said to have been paralyzed immediately after the attack. In the course of the next few months the paralysis subsided on the left side, whereas spastic paresis persisted on the right side of the body. The right angle of the mouth was distorted and unable to keep up with the movements of the left side. The muscle tissue of the right arm was in a state of increased tonus and appeared somewhat hypertrophied. The arm was held rigid, and its movements were considerably slower and more awkward than those of the left arm. In walking the patient presented the phenomena of athetosis; the right leg remained in extension and dragged behind. The patellar tendon reflexes were increased, and there was dorsal clonus on the right side. These clinical phenomena must be interpreted in such a way that as a sequel to severe pharyngeal diphtheria there appeared a typical series of post-diphtheritic paralyses, simultaneously with post-diphtheritic weakness of the heart, leading to thrombosis and

embolism of a cerebral artery on the left side of the brain.

Enuresis in Children.—Arture Cavalieri (Rivista di Clinica Pediatrica) classifies enuresis of children, according to the cause, into four divisions, excluding all cases resulting from general, spinal, or brain diseases. The condition is essentially a neurosis, and hereditary nervous conditions are often to be found as remote causes. According to some, the cause is a hypoplasia of the central nervous system. The immediate cause is a hyperexcitability of the detrusor vesicæ, with relaxation of the sphincter of the urethra, or a lack of development of the prostate and failure of the bladder orifice to close. The therapeutic measures must depend on the one of these conditions that exists. General hygienic and dietetic measures are appropriate in all conditions. For hyperexcitability of the detrusor, belladonna in increasing doses at night, valerian and warm baths are the best remedies. For deficiency of the sphincter, strychnine and faradization are useful. For reflex enuresis, the removal of the cause is all that is needed. In deficient closure of the bladder, with other deformities, massage and systematic dilatation of the urethra are useful. The most brilliant modern method of treatment is that of Cathelin, the injection of physiological salt solution into the spinal canal, entering the needle in the hiatus sacralis. The effect is supposed to be due to stimulation of the nerve roots.

Colitis.—Mummery (Lancet) from a study of thirty-six cases, has been driven to the conclusion that colitis, or colica mucosa, has no more claim to be described as a disease than diarrhœa or hæmatemesis. It is a symptom or condition which may result from a number of different diseases of the colon of widely different characters. The causes for the condition are in many cases confined to the lower part of the sigmoid flexure and rectum; it is here that stagnation and pressure occur from constipation and that irritant materials collect. Diarrhœa is of course a prominent feature, but in almost all cases there is an antecedent history of constipation. Bleeding occurs in about two-thirds of the cases, in most cases being accounted for by the fact that definite ulceration is present in the bowel. Mucus is present in the stools in practically all cases. It may be thin and fluid, thick and gelatinous, or in shreds and strings. Large mucous casts are often present. Enterospasm is occasionally seen. This is a localized contraction of the bowel, often resulting in a temporary intussusception. It most usually occurs in the descending colon or sigmoid flexure, and is accompanied by extreme pain localized to that portion of the abdomen in which the contracted portion of the bowel lies. There is definite inflammation of the mucosa in sixty-six per cent. of the cases. The mucous membrane is usually injected and bright red, and the surface dull and granular. Ulcers, if present, are shallow, of an irregular outline, and have a granular base. Ulceration is usually, but not always, present when the symptoms are severe. Appendicitis may cause colitis in several ways, and removal of an inflamed appendix is often followed by a complete cure. Adhesions are also an important factor. In the inflammatory conditions complete rest in bed is advisable, and irrigations, if properly carried out, furnish the best results. The irrigation must be done with a douche, and the reservoir must not be raised more than one or two feet above the anus. A simple alkaline lotion is best; hydrogen peroxide may be used if there is much ulceration. The most difficult cases are those in which there is hypertrophic catarrh. Stimulating injections here give the best results. In cases in which no local cause can be found to account for the symptoms, and in which no material improvement has followed careful medical treatment, surgical interference is indicated. Laparotomy should be performed; any adhesions divided; an unduly lax sigmoid mesentery should be shortened; and a retroflexed uterus fixed in the normal position, etc. The advisability of resecting any thickening or ulceration of the bowel wall may have to be considered. The operation of ileosigmoidostomy is not advisable, except in a few exceptional cases, and where it is the only means of saving the patient from becoming a chronic invalid.

Treatment of Chronic Coryza of Scrofulous Children.—Christin (Le Progres Med.) describes the treatment of chronic coryza in children of scrofulous diathesis by the use of the warm arsenical waters of the springs at Borboule, France. There are many children from six to fifteen years of age that are pale, with anxious expression, and suffering from a continual mucopurulent discharge from the anterior and posterior nares, without odor. This is swallowed, and runs over the lips. Rhinoscopic examination shows an atrophic mucous membrane and masses of mucopus. Posteriorly there are seen large pale vegetations and traces of operative interference. The pharyngeal tonsil is ridged and the hollows contain mucopus. The glands of the neck are enlarged. There are frequent complications resulting from infection of the auditory apparatus and larynx, as well as a tendency to bronchitis and tuberculosis. The general condition is the main cause of

the affection, not the local lesions. The position of Borboule, on elevated ground, is of value climatically. The valley is protected from the north winds and opens toward the south. The effect of the arsenical water on the general health is marked. It is also useful at the normal warm temperature of the springs in the form of douches to the nasal mucous membrane. It produces a congestion of the respiratory mucous membrane and an increased capillary and glandular activity which is of great value in such cases. The arsenic in the water also has an effect on the mucous membrane.

The Treatment of Severe Anaemia with Transfusion of Blood.—Morawitz (Munch. Med. Wchschrft.) points out that in the employment of blood transfusion the so-called ferment-intoxication can be entirely avoided by allowing the defibrinated blood to stand for a short time, after which it is filtered without pressing out the coagula. A number of cases of very severe anæmia, with an apparently unfavorable prognosis, were very considerably improved by the transfusion of from 150 to 200 ccm. of defibrinated human blood. The subjective and objective improvement of the patients was invariably delayed for a few days after the procedure, so that the therapeutical effect cannot be referred to the transfused red blood corpuscles. The author inclines to the assumption that in these cases of severe anæmia the bone marrow, while still capable of reaction, can no longer be stimulated by the body itself, nor by medicinal agents, but does respond to the introduction of alien blood with an energetic reproduction of its own blood.

These favorable therapeutic experiences are certainly encouraging for the employment of transfusion in suitable cases, after the failure of other methods of treatment. The author recommends venesection, with introduction of the defibrinated blood, his method constituting a revival of the direct transfusion of the past, for a long time abandoned on account of the frequent occurrence of thrombosis and embolism. The use of defibrinated blood was supposed to do away with the danger of coagulation, but the workers of the past found it impossible to eliminate the total amount of fibrin ferment, which is sufficient for the production of coagula, through combination with the fibrino-plastic substance.

Treatment of Uremia.—Russell (West London Medical Journal) advances strong arguments in favor of the proposition that the cerebral manifestations of uremia are dependent upon cerebral anemia produced by an increase in the intracerebral tension resulting from cerebral edema. He cites the excellent effects which have been reported as the result of lumbar puncture practiced for the relief of uremia. The promptitude with which the improvement has occurred after such a procedure has been such as to leave no doubt in the minds of observers that the relation was one of cause and effect. It is also noteworthy that in most of the cases the cerebrospinal fluid escaped under considerable pressure, though McVail states that in neither of his cases was this the case, the fluid merely dropping away. The writer believes that lumbar puncture should be performed in cases of uremia in which coma, convulsions, or really severe headaches are the dominant features, and that the presence of a high blood-pressure would be helpful as indicating the advisability of this procedure. He has no explanation to offer for the material improvement that sometimes undoubtedly follows venesection, since this by lowering the blood-pressure would act in opposition to the compensatory mechanism which maintains the cerebral circulation in the presence of the high intracranial tension, and so should be a harmful rather than a beneficial procedure. It is possible, however, that the benefit which sometimes follows its employment is due to the relief of the failing heart with right-sided distention.

Postpartum Hemorrhage.—Le Page (British Medical Journal) advocates raising the pelvis to cause blood to gravitate toward the heart and brain, and to prevent bleeding from the uterine and ovarian veins. The aorta is compressed to immediately arrest arterial hemorrhage. The spinal column beneath and above the umbilicus is very prominent and broad, and for the length of three or four inches forms an admirable *point de resistance*, for the aorta lies immediately over it. Compression is best made by the outer, the ulnar, portion of the left clenched hand, than which nothing could be more convenient and effective. Pressure should at short intervals be made to slide from one part to another of the available three or four inches, that no injury be done to the sympathetic system of nerves which forms a network around the vessel, and should be continued until uterine contraction is secured, even if this be delayed for one or two hours. Its release must always be very gradual; the greatest care in this particular is essential. An important fact is that, although no blood is allowed to pass the compressing hand, there is still a sufficient, but very limited, flow through the ovarian arteries to maintain uterine vitality.

He raises the legs and arms to transmit their blood into the trunk, and then bandages them firmly to prevent the return of

blood when they are lowered. The effect of this maneuver is that in many cases a tension of the blood stream approaching the normal is attained in one or two minutes. Ergot and other remedial measures are at once available.

The hand, rendered aseptic, is then very carefully passed into the uterus—first, to detect any possible laceration of the body or cervix or any remaining portion of placenta; and secondly, to afford a *point d'appui* for grasping and compressing the uterus from outside. Having elevated the pelvis and limbs, it may be thought by some that it is unnecessary to firmly bandage. This is not so, for it would be impossible to keep the patient in that position for any considerable time, and to lower them would be to endanger her from syncope; nor is the tourniquet allowable, for it is altogether necessary to observe great caution in restoring the circulation—that is, in allowing the blood to be taken from the trunk slowly and in a ratio with the increase of its volume by absorption and assimilation.

The vast advantages of this intrafusion of whole blood are: In extreme cases tension in the vessels is immediately restored, and the heart and lungs are filled with whole, normal blood. The paramount importance of this must be evident. Contrasted with the intravenous injection of saline fluid or the intercellular injection of other fluids, it should be obvious that whilst the latter comparatively slowly increases the bulk of fluid, blood both supplies resistance for the heart to act upon and is that alone through which a normal vital condition can be restored, and the nerve centers develop that energy without which the uterine muscle cannot contract and retract.

This treatment—which he submits is rational, always practicable, and, so far as his experience goes, unfailing—is based on the proposition: That no work can be done without energy; that there is no energy inherent in uterine muscle; that contraction of the uterus is wholly dependent on energy derived from the uterine nerve centers; that, deprived of blood, nerve centers do not, and cannot, develop energy; and that, in the collapse of profuse hemorrhage, there is practically stasis in the vascular system which supplies the nerve centers. Therefore, as depletion of blood is rapidly going on, instantly arrest the flow; as nerve centers are paralyzed, restore their vitality; and lastly, as the uterine muscle is uncontracted, now that the patient is safe, and innervation is re-established, use such measures as may be necessary to secure normal firm contraction.

The personal experience of the author, derived from the responsibility for about 5000 parturitions, has so far attested the soundness of this theory and afforded proof of its practicability, in that he has never seen a death from postpartum hemorrhage.

Postoperative Eventration.—Rheaume (L'Union Medicale du Canada) cites Wenter's statistics to the effect that of a thousand operations performed in the Berlin clinic one-third of the women subsequently suffered from eventration. If, however, the abdominal walls be sutured in three places the accident occurs in only five per cent. of cases. The author states that even with modern technique the accident is sufficiently common, and observes that the position of the incision is a distinct predisposing factor. The middle line, because of its lack of vascularity, heals slowly, and lacking in muscular elements readily gives way after consolidation. Drainage, suppuration, incisions of large size, and abdominal distention are all predisposing factors. The author advises opening the abdomen through an incision placed three or four centimeters one side or the other of the middle line. This cut is made as short as possible. Before closing the peritoneum tension sutures of silver are introduced, entering the skin about 4 centimeters to one side of the cut, traversing obliquely the entire thickness of the abdominal wall, including the peritoneum, and emerging 4 centimeters on the other side. The peritoneum is then brought together by buried suture; a second suture approximates the anterior aponeurosis covering the rectus muscle, and a third suture closes the skin incision. Thereafter these sutures are relieved of all tension by means of little pledgets of absorbent cotton slipped over each end of the wire tension sutures, followed by one-eighth inch of drainage tube, and the whole clamped down against the skin by means of a perforated shot. When the incision is 10 centimeters in length a single relaxing suture is sufficient. A long incision requires two or three such sutures. They are left in place for about fifteen days.

As to the results, the author notes that sometimes a superficial sloughing of the skin is produced by a pledget of cotton. Because of lessened tension on the lines of suture suppuration is less frequent.

Cytotoxins of the Ovary.—Dobrowolski (Gyn. Rund) has studied the secretions and toxins of the ovary, making experiments on animals by the production of a toxic and of an antitoxic serum from the ovaries and the corpora lutea. It has long been known that the ovary produces an internal secretion which has a marked effect on the female genital organs, as well as on some

of the processes of metabolism. It is a well-known fact clinically that when the ovaries cease to act at the menopause, or after removal for disease, the woman begins at once to put on fat. It is supposed that this is the result of the absence of the ovarian secretion. The author produced a cytotoxic serum from the ovary, which acted on the general metabolism without influencing the ovaries or ovulation. The author found that the animal into which this serum was injected became emaciated, losing all its fat, and finally died. This corresponds with the clinical facts of obesity coming on when ovulation ceases. It is also known that women who become fat have irregular and scanty menstruation, and are generally sterile. In osteomalacia there is extreme emaciation and at the same time there is activity of the ovaries, as is shown by the occurrence of pregnancy in osteomalacic subjects, who are so weak as to be unable to get about. As soon as the ovaries are removed in these cases the emaciation ceases and the bones harden, while the patient returns to a normal condition. These results are probably dependent on disturbances of the internal ovarian secretion. The experiments show that the isotoxins of the organism do not act and the injection of isotoxic ovarian serum is similar in effect to injection of ovarian or corpora lutea substance. The effect of the serum is the same, whether the whole ovary is used or only the corpora lutea. This serum is toxic in high degree, producing emaciation, and heating the serum does not change its properties, but only weakens them. When injected into an old animal the effect of the serum is lessened. The author also succeeded in producing a serum that entirely protected the animal against the toxic serum and prevented emaciation. Neither the toxic nor the antitoxic serum produced changes in the animal's organs that could be demonstrated histologically.

Streptococcus Pyogenes and Puerperal Infection.—Gonnet (L'Obst.) says that although puerperal infection may be caused by a number of micro-organisms the greater number of cases arise from the presence of the streptococcus pyogenes, and in such cases the infection is serious and the prognosis bad. Examination of the lochia for the streptococcus pyogenes is most important, since the knowledge of its presence is of great weight both as to prognosis and treatment. From the researches that have already been made we learn that the streptococcus is generally found at the entrance to the vagina, but not in the cervix. As to the vagina itself, results differ. It has been found by the author that the streptococcus grows best on a combination of blood serum and agar. Here the colony appears like a black point on the red culture medium, while it is surrounded by a whitish areola due to absorption of the blood by the germs. This is quite characteristic of the streptococcus pyogenes, occurring with no other germ. The author examined the vaginal secretions of one hundred women pregnant about eight months. Secretions from the vaginal culs-de-sac were cultivated daily. The streptococcus pyogenes was not found in any of them. In 15 per cent. streptococcus gracilis was found. The lochia was examined after labor from the fifth to the seventh day. In 90 per cent. there was no streptococci. In six there was streptococcus gracilis. In four there was streptococcus pyogenes of the resorbent type, and with them clinical symptoms of infection. None of those patients that had streptococcus gracilis during the time before delivery were infected. The deduction made by the author is that the streptococcus does not exist in the vagina before labor, but is brought there during labor or soon after. All the secretions of those cases in which there was a rise of temperature without evident cause were cultivated. A patient whose temperature was 37.8 degrees C. was isolated, in whom the blood agar test had shown vaginal streptococci. The following day the temperature rose and a true case of serious puerperal infection followed. By such means the obstetrician is advised of the coming dangerous infection, and is enabled to isolate the patient before others have been infected. The number of cases of puerperal fever has diminished at Febre's clinic since these examinations have been made. The examination of the blood of locally infected patients is of value in showing when the infection becomes general. An examination of the blood is made every four or five days in local infections. The presence of the streptococcus in the blood indicates a fatal infection, and assists in the prognosis. When there was no infection of the blood, most cases of local infection recovered. The disappearance of the streptococcus from the blood does not indicate recovery. Even when the blood has remained sterile for twenty-four hours death may ensue. The author advises his method of examination of the lochia and blood as of great value in diagnosis and prognosis, and furnishing the indication for operation or treatment.

Treatment of Sciatica.—Fowler (Practioner) defines sciatica as pain in the sciatic nerve, due to a primary localized interstitial neuritis. It may also be secondary to pressure, growth, or inflammation in structures continguous to the nerve. It may also be

simulated by various conditions. Toxæmia, sepsis, rheumatism, and gout often predispose to it. It may be excited by pressure, strain, cold, etc. Active inflammation in the nerve and its sheath has been actually observed. Voluntary movement is rarely lost, and the muscles, though weak, seldom degenerate. Herpes and œdema of the leg are occasional symptoms.

Rest in bed is the initial requirement in the treatment of this disease. The support of a splint is frequently helpful. The diet should be liberal, alcohol being excluded. Salines and blue pill are useful as aperients. Counter-irritation by a variety of measures is often very effective; if this fails, the nerve may be stretched. Galvanism and other forms of electricity are often beneficial, also X-rays. In the later stages of the disease massage may be used, but not in the early stages. Hot baths are highly recommended. If anodynes are required, a daily injection of hyoscine is preferable to any other narcotic.

Cardiac Dilatation.—Duckworth (Lancet) states that in dilatation of the heart the main indications for treatment are first to promote the power of the heart's walls, and, secondly, to relieve the venous engorgement which has arisen from their loss of function. The more pressing duty is to unload the venous system. It is seldom that a general venesection from the arm can be justified, unless it be of small amount, not more than six or eight ounces. Direct bleeding is oftener better done by the application of six or eight leeches to the epigastric or hepatic regions. The process of leeching is a source of more relief and comfort than the amount of depletion would indicate. A poultice should be placed over the leech bites, which encourages further depletion and induces a favorable hyperæmia over a large surface. The hepatic congestion should be further relieved by purgation, the best purgative being mercury in some form. It is the best agent for lowering the resistance in the arterioles and capillaries, and thus relieving the labor of the exhausted cardiac walls. The dietary is important. It should be rather dry if it can be borne. Small feeds every three or four hours with solid or semi-solid food are best. Much fluid with the meal is objectionable, as it depresses the stomach and the heart. Alcohol is commonly necessary, and is best given as old brandy, not more than two to four ounces in the twenty-four hours being given. Hot water should be given in the morning to promote diuresis; when the heart is once relieved, the urinary flow is more free. Ascites, if urgent, may demand tapping, and extreme œdema of the legs must be dealt with by Southey's trocar. There is often difficulty in securing adequate rest and sleep at night. Recumbency is seldom possible, and the patient may be allowed to sit in a properly adapted chair with support for the arms and a rest arranged for the head to lean somewhat forward.

Serotherapy of Dysentery.—Vaillard and Dopter (La Presse Medicale) distinguish between the two forms of dysentery, that due to the presence of a protozoon, the *Amoeba dysenteriae* or *Entamoeba histolytica* of Schaudinn, and that due to the presence of a certain bacillus, known as the bacillus of dysentery, and it is with the treatment of the latter form of the disease that this paper deals. They state that the systematic use of antidysenteric serum not only reduces the mortality to a marked degree, but also relieves the suffering and hastens the recovery. It is injected subcutaneously into the cellular tissue with the usual antiseptic precautions in doses which vary according to the time of intervention, the gravity of the case, and the age of the patient. In adults, in cases of moderate severity, twenty c.c. may be given at first, and this dose is often sufficient to determine a reduction of the symptoms and a rapid recovery. If after twenty-four hours have passed the colic persists in its former intensity and the stools still remain very frequent, a renewal of the injection is indicated. Sometimes a third injection of a smaller quantity is useful to hasten the recovery. In the severer forms of dysentery from forty to sixty c.c. may be injected in a single dose, followed by decreasing doses, according to its effect on the intestinal trouble. In very severe cases the dose may be increased to eighty, ninety, or a hundred c. c., divided into two injections during the course of the day, followed by decreasing doses. In children the doses are smaller. Relapses are exceptional and may easily be met with by a single injection of the serum. The annoyances which accompany the use of this serum are those which accompany the use of all therapeutical sera, the production of urticaria, polymorphous erythema, arthralgia, and myalgia, which may be accompanied by a slight rise in the temperature. Adults are more subject than children to these febrile erythematous manifestations. They may be avoided, or at least lessened, by the ingestion of two or three grammes of calcium chloride on the day of the injection and on the two following days. The use of ten cubic centimeters gives an immunity against this form of dysentery which lasts from six to twelve days This can be utilized in families where there are children to protect,

and persons who are exposed to the contagion.

Heart Disease and Pregnancy.—Blacker (British Medical Journal) states that the old idea that the heart normally hypertrophies during pregnancy is not proved beyond the possibility of a doubt. It is probable that in some cases hypertrophy of the heart is the chief change which occurs, while in some there is dilatation rather than hypertrophy, and in others there is hypertrophy of the left ventricle and dilatation of the right side of the heart. It also appears certain that in some healthy women, at any rate, neither dilatation nor hypertrophy of the heart occurs during pregnancy. There are no characteristic or important changes to be met with in the pulse of pregnant women. On the whole, the evidence is in favor of the view that the blood pressure is raised above the normal. The rise takes place gradually during the second half of pregnancy, reaching its maximum at the close of the same. During the second stage of labor there is a further marked rise, with a sudden fall to below normal immediately after delivery. The normal mean is reached again by the fifth day of the puerperium. There are no important changes in the blood itself. The two special dangers of heart disease associated with pregnancy are failure of compensation and the occurrence of degenerative changes in the heart muscle with consequent cardiac failure. As a rule the compensation is sufficient and there are no symptoms. If they do arise they are the ordinary symptoms of uncompensated heart disease. Abortion is probably more frequent in cases of heart disease than in healthy women, due to failure of the systemic circulation with resultant small hæmorrhages in the soft decidua of the uterus. Sudden cardiac failure due to degeneration of the heart muscle does occur in pregnancy, but is uncommon. Death from cardiac failure during labor is very uncommon. It may be the result of apoplexy, embolism, or heart failure, and is undoubtedly favored by the rise in the blood pressure which takes place during the second stage of labor. The heart may give out in one of three ways after the birth of the child, (a) immediate cardiac failure due to over distention of the right side of the heart with resultant paralysis; (b) failure due to accumulation of the blood in the large abdominal veins in consequence of the rapid fall in the blood pressure; and (c) cardiac failure some days after delivery, from degenerative changes in the heart muscle and failure of the heart to recover from the shock. The danger and the death rate depend mainly on the condition of the heart muscle and not so much on the nature of the valvular lesion. In bad cases of heart disease complicating pregnancy the patients should have absolute rest ig bed. In many cases the correct treatment is to relieve the strain on the heart by the induction of abortion or premature labor. During labor the risk of cardiac failure must be guarded against; postpartum hemorrhage should be encouraged where there are signs of over distention of the heart, or the patient should be actually bled. It is not right to say that a young woman who has heart disease should never marry. Cardiac failure will probably occur sooner or later, whether she becomes pregnant or not. It is true that if she marries she should not have children, and if she does have a child, she should not nurse it. Although the mortality in these cases is as high as twelve per cent., yet the majority do perfectly well.

Sterility Among X-Ray Workers.—Jordan (British Medical Journal) refers to this untoward result of X-ray work upon operators. He has not found any data bearing on possible recovery from sterility thus produced. If it is recognized while there are still immobile spermatozoa, it would appear possible that two or three years of complete abstinence from X-ray work might result in some degree of recovery. After some remarks on protective devices used by others, he suggests as sufficient the following protective measures: The tube box should be made entirely of wood, and should be completely lined on the outside with an efficient protective rubber material with the exception of an aperture at the top which is controlled by an adjustable diaphragm. A view of the tube may be obtained through a small lead-glass window covered with a flap of a protective material. The operator should always wear a protective apron reaching from the shoulders to below the knees, and, as these two means are not sufficient, he should also have an upright rectangular wooden screen, three feet three inches in height and two feet in width, lined on both faces with three-pound sheet lead, and should place it close to the couch between himself and the tube box. A larger screen (say four feet square) should be supplied for use while X-ray treatment is in progress. The screens may be mounted on castors. Screens of the sort described are not in the operator's way to an uncomfortable extent. For treatment the tube should always be completely enclosed. Eventually, the author believes, sheet metal shields and tube boxes will be available, but this cannot well be before static machines have been so far improved and developed as to be used in place of induction coils, as has been done with

great success.

The Use of Morphine in Asthma.—Goldschmidt (Berliner klinische Wochenschrift) says that while all the textbooks contain the strict injunction not to give morphine to asthmatic patients, and the number of morphine habitues who are led to begin the habit through its administration for this disease is very large, nevertheless most practitioners find it necessary to resort to opium in many of their cases of asthma. He himself is of the opinion that if carefully watched and controlled the use of the drug is not very dangerous and forms an almost indispensable part of the treatment. Two broad types of cases may be distinguished, those in which the attacks occur at rare intervals and those in which a more or less persistent asthmatic state or status asthmaticus exists. There can be no objection to giving morphine to patients of the first type who have attacks lasting only one or two days, but even in instances of the chronic form for a time at least it may be used without danger. A point of great importance is to realize what exceedingly minute amounts suffice to produce the desired effect. Doses ranging from three to five milligrams hypodermically are usually competent to bring relief in even the severest attacks. Administered in this way there is little tendency to producing addiction, but when the first symptoms of morphinism, instanced by the demand for a considerable increase in dosage, appear, some more harmless, though less efficient substitute, like chloral, must be employed.

Therapeutic Indications in Cancer of the Uterus Complicating Pregnancy.—Oui (Ann. de Gyn. et d'Obst.) considers the influence of pregnancy upon the development of cancer, and the influence of cancer on the progress of pregnancy and on the fetus. The author believes that it is impossible to say positively that the occurrence of pregnancy causes a more rapid development of the cancer. For the mother mortality immediately following labor and the puerperal state is not the result of the cancer alone, but of infection, and may be most favorably modified by the skill of the physician. For the child, interruption of labor before the arrival at term may kill it in about one-quarter of the cases, while a rapid and well-conducted intervention will in most cases bring about successful delivery at term. As to the care of the patient during pregnancy we must distinguish between operable and inoperable cases. If inoperable only palliative treatment for the mother is to be considered. In operable cases, during the first two months, with a small cancer distinctly localized, hysterectomy is permissible. Later premature accouchement is not permissible. Curettage of fungosities and amputation of the cervix should be proscribed, since they sacrifice the child and do not help the mother. Hysterectomy should be done early, not waiting for the time of labor at term, since the child is seldom benefited and the mother will be sacrificed by the loss of her chance of successful operation. The conduct of labor will depend on whether a small or a large part of the cervix is involved in the cancer. If the cancer is small dilatation may be possible, and labor may terminate naturally, though slowly. All forcible extractions should be proscribed, a Caesarean section being done in preference when it is necessary to interfere to save the child. If the cancer is inoperable, a Porro operation is most successful in prolonging the life of the mother. The Caesarean section must be done early, before the child has been weakened by prolonged efforts at delivery. In operable cancer the section should be followed by an immediate hysterectomy, which removes the source of possible puerperal infection and the growth at the same time.

Anesthetization for Operations on the Urinary Organs.—Mortimer (West London Medical Journal) states that there are probably no operations, even those involving the air-passages, in which the skill of the anesthetist is more severely tested than in cases of prostatectomy, and he is quite fixed in his mind that ether alone is an unstable agent for producing anesthesia. The A. C. E. mixture is the one of his preference. He states that the trouble for which the anesthetist must be particularly on the alert occurs at an early stage when the bladder has been distended, and before the actual removal of the prostate. This distention causes shallow, hesitating breathing, with prolongation of expiration, accompanied in bad cases by disturbance of the pulse, and even by failure of both pulse and respiration. These symptoms are relieved by a prompt opening of the bladder. A case is recorded from the practice of another anesthetist in which pulse and respiration ceased as the result of vesical distention, but resumed when this viscus was opened.

The author notes that he has had two similar experiences. He holds that the process of enucleation acts as a powerful respiratory and circulatory stimulant, the effect of which is at once noted in the deepened breathing and fuller pulse. If, however, the patient is in poor condition, or the enucleation prolonged, it is probable that these favorable signs will not appear, or will be replaced by those of depression and shock. An especial difficulty is that incident to rigid contraction of the recti and

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levatores ani muscles, which may be set up in conjunction with the contraction of the bladder, or immediately the surgeon begins to enucleate. This the author states may extend to the muscles of the lower jaw, tongue, and larynx, and must be regarded as peculiar to the operation, occurring in spite of the patients being fully under the anesthetic and persisting sometimes even when this is pushed to a dangerous degree.

In kidneys operations the author apparently regards ether as objectionable not so much because of its irritating effect on the kidneys, as from the fact that when patients are in the lateral position, even when an arm-rest is used, the chest movements are more hampered than in the supine position and consequently accumulation of mucus is likely to occur. The author notes as a complication of renal operations that when the kidney is pushed from the front there often results a gush of fluid from the stomach, accompanied by little if any retching.

The Interstate Medical Journal (St. Louis) announces the purchase of the St. Louis Courier of Medicine, one of the oldest medical journals in the West, and its consolidation with the Interstate on July 1st.

The St. Louis Courier of Medicine was established in 1879 by an association of prominent St. Louis physicians. It has always commanded a large following throughout the West and South, and held the respect and esteem of the entire profession of this country.

This merger removes from the field an old and highly esteemed contemporary, and its consolidation with the Interstate adds strength and prestige to that periodical. This is the fourth medical journal that has been purchased and absorbed by the Interstate during the past few years.

At a meeting of the Wake County Medical Society, held at Raleigh, N. C., on the 11th of July, the alumni of the Baltimore Medical College organized a State Alumni Association for North Carolina. They elected Dr. J. M. Templeton, Cary, N. C., president, and Dr. Jas. M. Judd, Cardenas, N. C., secretary and treasurer.

The organizers of this Association want to know all the Baltimore Medical College alumni in the State. They would be glad to have them forward their names and addresses to the secretary for enrollment. Their next meeting will be held in Winston-Salem at the time of the State Medical Society meeting. They cordially invite all the alumni of this college to be present.

Clinical Note Showing the Value of Acetozone in Surgery.

Every physician meets early and often in his practice serious cases of infection arising from apparently trivial causes, and sometimes these infections are so virulent that it taxes the patience and ingenuity of the practitioner to control them.

The usual recourse in such cases is naturally a germicide, and for the benefit of others who may find themselves situated as I was, I wish to relate the history of a case in which a powerful member of this class of useful agents was tried without avail, which yielded finally to acetozone. This drug I had used on previous occasions in minor infections with good results, and I would doubtless have saved time in this graver case had I used it earlier.

Mr. H. has been a continuous sufferer from the effects of a bunion on the fifth metatarsal, for which he had received repeated treatment, without result. During these years of inconvenience due to the thickened, hardened condition of the skin, he formed the vicious habit of paring the part with a pen-knife. He was repeatedly warned by his various physicians of the danger of infection, without heed, and finally he did infect himself, with the most virulent type of streptococcus.

On first seeing him, the seat of inoculation was much inflamed and a marked lymphangitis showed the severity of the infection. The pulse at this time was 106, the temperature 103 deg. F.

The atrium of infection was at once opened and part of the periosteum and bone removed and free drainage instituted. Hot bichloride (1-4000) dressings were applied, the foot was elevated and the patient was kept absolutely quiet in bed. During the second twenty-four hours conditions remained very much the same. On the third day the infection progressed, involving the entire leg, the temperature rising to 104 deg. F., the pulse rate to 140. Numerous incisions were made along the lymphatics, with the hope of retarding the progress of the infection. The parts were thoroughly irrigated with bichloride (1-4000) but little, if any, improvement followed, and on the fourth day a consultation was requested. The consultant immediately advised amputation, but the patient declined the radical procedure. Temperature 103 deg. F., pulse 140, general conditions showing the severe effects of the infection.

As the present treatment seemed of little avail and the outlook very grave, I decided to try acetozone as a local antiseptic. The bichloride dressings were taken off, and the parts were irrigated with sterile water, followed by continuous irrigation with aceto-

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zone (1-1000). A large moist dressing was applied and the leg was elevated.

In four hours (fifth day) the pulse and temperature commenced to subside, the general condition of the patient improved and this improvement was continuous. In ten days the pulse and temperature were normal. The patient recovered with a fairly good limb.

As to the cause of the good result, no one can say positively; but from the fact that with all the associate treatment to aid recovery, one of the best antiseptics had been used without effect, and at a time when it seemed the patient would lose his life as a consequence of septic absorption; and from the fact that the local treatment by acetozone solutions without delay caused marked improvement, I feel that this agent is worthy of thoughtful consideration and a fair trial. —GEORGE L. A. DALE, M. D., Chicago Illinois; Member Fox River Valley Medical Society; Chicago Medical Society; Illinois State Medical Society.

According to the requirements of the new meat inspection law there will no longer be any "Frankfurter sausages" put out in the United States and represented as original "Frankfurters" imported from Germany. Everything will have to be labeled with the true name of the product. What used to be sold as "picnic hams" must sell under the name picnic shoulders. The picture of the chicken which used to adorn the cans of potted veal must be turned to the wall.

The Atlantic Coast Line Surgeons at their meeting which adjourned at Norfolk, Va., July 24, elected the following officers:

P. J. Thomas, Wilmington, N. C., president; J. H. McIntosh, Columbia, S. C., vice-president; J. H. Pittman, Jacksonville, Fla., second vice-president; C. R. Oglesby, Waycross, Ga., third vice-president, and M. Moran, Pinners Point, Va., secretary.

There was a fight on between Jacksonville and Wilmington for the next meeting place of the surgeons and the matter was placed in the hands of the executive committee for a decision.

County Societies.

At the annual meeting of the Rowan County Medical Society, held in Salisbury July 8, the following officers were elected: President, Dr. J. Meigs Flippin, Salisbury; vice-president, Dr. H. L. Monk; secretary, Julius A. Caldwell, Jr., Salisbury; treasurer, Dr. Henry T. Trantham, Salisbury, and delegate to the State Society, Dr. Robert V. Brawley, Salisbury.

The New Hanover County Medical Society, at its recent meeting, elected Dr. Joseph Akerman president; Dr. S. Everett Koonce, vice-president, and Dr. Charles T. Harper, secretary, all of Wilmington.

The Treatment of Inoperable Malignant Tumors—Carcinoma.

I have two reasons for presenting a discussion of the treatment of cancer at this time: First, the importance of the subject, and, second, the hope that I have discovered a method which may result in saving many lives. It has been affirmed by Wutzdorff that there has been an increase in the number of cases of cancer in the last few years, and some, with Sir W. M. Banks, believe the increase is due to excessive meat eating. At any rate, it has been shown that many cases occur in robust and well-fed individuals, and especially in the comparatively young of both sexes. It often happens that the presence of such a growth is not suspected until it is too late for operative interference, because of the fact that the appearance of the patient does not indicate the progress of the disease (Nothnagel). Many cases also occur which cannot be operated on because of the location, as when situated near vital organs or around important blood vesiels. Then, again, there are patients who will not submit to an operation.

To the medical man has usually fallen the duty of caring for these classes of unfortunate cancer patients and from time immemorial the professional mind has been taxed to discover some means of relief, some agent or remedy which might destroy the abnormal growth.

Lauder Brunton was the first to investigate the chemical composition of cell-nuclei from which has been secured a compound called nuclein. This substance is an albuminoid and contains phosphorus. Nuclein is the most distinctive element of leucocytes, being the constituent by virtue of which the cell grows (E. R. Larned). Vaughn and McClintock have demonstrated that the nuclein is the germicidal agent in blood plasma and is furnished by the polynuclear leucocytes.

The bromide of gold and arsenic is another remedy which, in my hands, has seemed to prove useful in the treatment of inoperable carcinoma; but I have always used it in connection with other agents. I have had more confidence in the nuclein than in the bromide, chiefly, perhaps, because I have had two cures in which I did not use the bromide, while I have had none where nuclein was not used. I have come to consider the administration of nuclein and the bromide of gold and arsenic together as a most rational and valuable treatment in cases of inoperable carcinoma. It is the combination upon which I depend rather than on either agent singly.

I have used this method of treatment in many cases with apparent benefit, but I am able to report only five cases in which the treatment was carried out as prescribed from the time the patient came under my observation until the termination of the case. One of the cases died. The other four recovered.*

Case I.—Mrs. S., aged 50. She had suffered no serious illness prior to the beginning of her present ailment, about one year before my first visit. Her first symptoms were indigestion, flatulence, heartburn, eructation of gas and similar disturbances of the stomach. The symptoms had gradually grown worse until pain and vomiting had supervened some weeks before. She had lost flesh and grown weak. At the time of my first visit the patient was lying on a couch, in pain, pale and cachetic. She had been vomiting and apparently had suffered much. The ejecta having been destroyed, no opportunity offered to analyze the vomited material at that time. The temperature was normal. Temporizing treatment was adopted and the patient was not seen again for a week. Then I was summoned hastily to see her and found her vomiting and in great pain. She had not been free from these symptoms since my former visit. This time, following my directions, the vomited material had been reserved for examination. The patient had not improved. The ejecta were typical and

*Only cases I, IV and V are cited here.

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abundant and contained dark grumous material, mucus and remnants of food. The occurrences of vomiting were periodical. A distinct tumor could be outlined at or near the pylorus. The bowel evacuations also contained a dark material. Chemical examination showed increase of lactic and absence of hydrochloric acid. The microscope showed cell-nests and bacteria. *Diagnosis, carcinoma of the stomach.*

Treatment.—The local treatment consisted of the use, by mouth, of a 2 per cent. solution of Hydrozone. The patient was told to drink half a pint of this solution half an hour before meal-time, lie on the back for five minutes, then turn on the right side and remain in that position for 25 minutes. This remedy was given for its antiseptic effect. The internal treatment was nuclein. The particular preparation was Reed and Carnrick's protonuclein. The dose was 24 grains a day. This time the patient was kept under observation for a month, until the symptoms were not quite so severe. The treatment was continued, however, and after several weeks I called to see the patient in another exacerbation of her symptoms; but this time they were not so severe. After a few days I dismissed her again, with advice to continue the nuclein, *but to omit the Hydrozone.* Some five months later I called to see the patient and found her at work about the house. The symptoms and tumor had disappeared and the cachectic look had given place to a more healthful appearance. I did not see her again, but three years later I was informed that she was well and had had no return of the old symptoms.

CASE IV.—Mrs. M. H., aged 38, mother of one child, six years old. She came to me in January, 1901. She was very nervous, somewhat cachectic, and suffered slight pain in the pelvis. She had slight, if any discharge, but was losing flesh. Digital examination revealed a hard enlargement on the anterior lip of the cervix. The growth presented considerable resistance to the finger, but the uterus was freely movable. The use of the speculum showed a small cauliflower area at the edge of the hardness and a slight discharge. The diagnosis made was probable carcinoma of the cervix. The patient put herself under my immediate care, so that I could watch the case daily. The local treatment adopted was spraying the cervix with full-strength Hydrozone, and the daily use of astringent and sterile douches. Internally, nuclein was used in 24 grain doses daily. A nervine and nux vomica were added to control the patient's nervous or unstrung condition. After a month of this treatment, the symp-

toms did not seem to be so severe. From this time the patient began to improve. In three months from beginning the treatment the hardness of the tissues had disappeared, the cauliflower appearance was removed and the pain and other symptoms had entirely subsided.

Case v.—Mr. M. L. E., aged 55, a teamster. He had been strong and well and usually free from any ailment except a diarrhoea until about a year before I saw him. The first intimation he had of serious trouble was in March, 1904. At that time he had pain and diarrhoea. A physician was called and discovered a tumor in the region of the sigmoid flexure. After recovery from the temporary illness, he sought advice concerning the tumor; and, although he visited several surgeons of note, no one seemed willing to remove the growth, and their opinions gave him no hope of final recovery and little expectation of temporary relief. Most of them refused to operate, saying that the tumor was probably cancer and he would be better off without an operation.

He came to me in January, 1905, and I found the following conditions and symptoms: He was cachectic, was losing flesh and had a tumor in the region of the sigmoid about the size of a child's head, which was tender on pressure. He had sharp, cutting pains in the tumor, suffered from flatulence, and had a diarrhoea with scybalous feces. He came to me because of my success with Case IV, of which he had heard. I advised an operation. He was willing to submit to one, but said that no one whom he had visited would agree to do it except Dr. J. B. Murphy, who was willing to operate upon request, but could not advise it with any hope of success. He returned to Dr. Murphy and was operated upon about January 25th at Mercy Hospital. Upon opening the abdomen a tumor four or five inches in diameter was found at the sigmoid flexure. The infiltration into the adjacent structures and the adhesions were so extensive that removal was out of the question. The diagnosis was carcinoma of the sigmoid. The wound was closed and the patient returned to bed. About the 20th of February he came to me again, and on February 22, 1905, I began medical treatment. I advised him to return to bed, which he did, and remained in bed for eight weeks after the treatment was commenced. The treatment was bromide of gold and arsenic, 45 drops, and nuclein, 36 grains, daily. By the 1st of May his pain had ceased, the tenderness had diminished, and the tumor had ceased to grow. By the 1st of July it was plain that the tumor was slightly smaller. He was permitted to return home on September 1st. About the middle of October he came again to my office. The tumor had entirely disappeared and all symptoms had subsided, including the diarrhoea. Dr. Murphy saw the patient soon after and confirmed my statement that the tumor had disappeared. A letter from the patient last month states that there has been no return of any of the symptoms—seven months after he was pronounced cured. He is in better health than for many years.

January, 1907, one and a half years after the cure was completed, he is in splendid health.

In presenting the foregoing cases, the author does not suggest that he has found an infallible cure for cancer, but rather that such results must convince us that cancer may be placed on the list of curable diseases. The treatment, to be successful, requires great care in carrying out the method. If the remedies are carelessly administered, satisfactory results cannot be expected. In all serious cases and internal tumors, I advise remaining in bed for weeks, depending upon conditions in individual instances. The bromide [i.e., the Arsenauro] must be gradually increased. Few patients will bear large doses from the beginning.—J. M. G. Carter, M. D., Sc. D., Ph. D., Waukegan, Emeritus Professor of Clinical Medicine, University of Illinois; Fellow of the American Academy of Medicine; Ex-President of the Illinois State Medical Society, etc., etc. (Abstract of paper read before the Section on Medicine of the Illinois State Medical Society, at Springfield, May 15-17, 1906. *Ill. Med. Jour.*, January, 1907. The bibliography is omitted.) Published in *The Illinois Medical Journal*, also in *The Therapeutic Medicine*, for April, 1907.

Post-Scarlatinal Desquamation.—Hall (British Medical Journal) reports the case of a child which came under his care with scarlatina presenting a copious rash. Although closely looked for, desquamation of even the most floury nature was never observed. At the end of about five weeks she appeared perfectly well, except for a very slight aural moisture. Two or three weeks afterwards her father developed scarlatina with every other symptom of the disease, except a rash. This no one ever could detect. At the end of six weeks, no desquamation having taken place, and feeling perfectly well, he suggested to the author that he should take a fortnight's holiday, at the expiration of which he considered he might safely resume his practice. A few days later the author received a letter from him stating that he was peeling profusely, and

he returned home. It was nearly two months before all the desquamation ceased. Three months after her attack was apparently cured, the little girl was sent to her grandmother's in the country. While out for a walk a nursemaid, accompanied by the child and a small boy cousin, used her own pocket handkerchief to both the boy and the girl. Both the boy and the nursemaid developed scarlatina in a few days, and had it severely. There was at that time no other case in the district. The author states that long ago he came to the conclusion that the desquamation stage of scarlet fever is not infectious, provided the throat is well and there is no nasal nor aural discharge.

New Hospital.

Gastonia, N. C., is to build a modern, well equipped, up-to-date hospital. The amount of money for the purpose of erecting the new building has all been subscribed. Small towns all over the southern part of the country realize the necessity of good hospitals. They all seem to be prosperous and doing fine work. This is the way to build up southern medicine and surgery.

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Dr. J. D. Heathman, of Woodleaf, N. C., has moved to Mooresville, N. C., for the practice of medicine. Dr. Heathman is a good physician, has a fine reputation, and will do well at Mooresville.

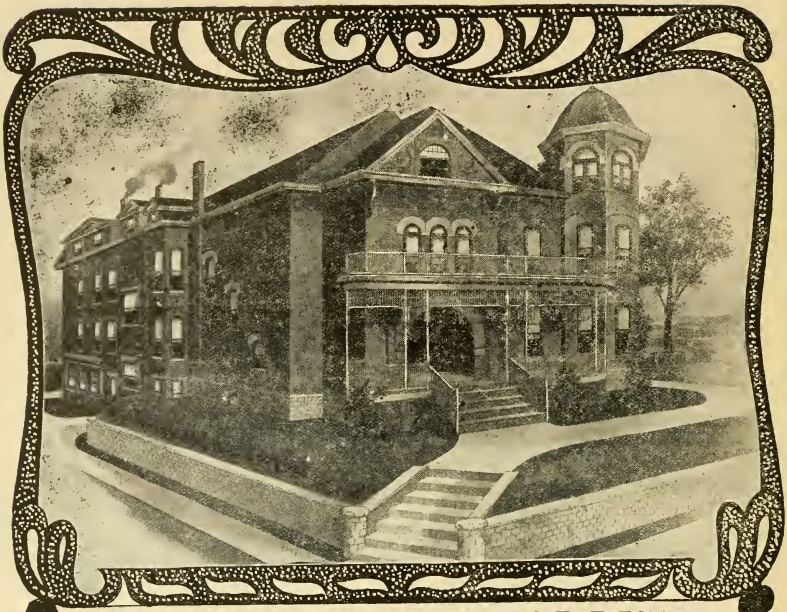
An English clergyman praised an old lady for fighting her way to church against a terrible tempest. She replied:

"My husband gets so cross-grained after his meals that I have to get out of his way, so I might as well go to church."

O. P. H. Belmont's French chauffeur had brought his imported automobile to the repair shop in Hempstead and one of the mechanics at once became interested in the complicated speed indicator which records in the metric system.

"That is great," remarked the mechanic, "but it would take a Frenchman to read it."

"Do you zink," asked the chauffer, "zat zeez masheen eez run by an Irishman?"



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Hysteria and Evolution.

Imprimis, it is well to remember that at present there is a tendency to withhold from hysteria, the designation of a morbid entity. Instead, it is defined as a modality of psychic changes which are included in the term, psychoneurosis. This tendency, says Schnyder in Le Bulletin Medical, is evidenced in Babinski's definition in Crocq's, which runs as follows: "Hysteria is a psychopathological state characterized by hyper-impressionability, diminution of cerebral control and hyper-suggestibility;" and in the ideas of Professor Dubois. In those instances where writers regard hysteria still as a special disease, there seems to be a desire to attribute to it an anatomical substratum, a particular cerebral localization.

To generalize, one may say that the hysterical modification of the mentality has its point of departure in a faulty judgment which leads to erroneous conceptions of real situations, and a lack of adaptation to them. Hysteria is above all else, a disease peculiar to the evolution of the human mind; it illustrates a break in the mental development. This sort of hysteria is as common among young individuals as among children but it is rarely encountered among the aged, because their mentality has gone through all the processes of evolution. In spite of certain analogies, one should not class the mentality of the aged with that of the child, because the latter has imaginative powers and desires unknown to the former. Likewise, it would be easy to demonstrate that hysteria is co-eval with the evolutionary phases in the history of humanity. It appears in history each time the aspirations of the human mind are limited and repressed by stringent laws and established order, during the periods which precede great moral, social and political revolutions. The best example of this is furnished us in the Middle Ages, which was the classic epoch of hysteria among the masses. This period in the infancy of individualism, according to an expression of Hellpach's, was opposed by the church and other conservative forces which united themselves into a formidable whole to crush humanity's efforts in its desire to achieve progress. Puissant manifestations of hysteria are never the attribute of a people having a too-refined civilization. This is Moebius' opinion. Hysteria is no more characteristic of a decadent people than of the individual whose decadence is the result of great age. It is a manifestation among individuals in whom the mentality represents a primitive period in the mental evolution of the species, such as we find among children.

Certain classes of individuals illustrate a mentality, which for the development of hysteria, is excellent ground for culture. These individuals are to be found either in the rural districts or among the proletariate classes. Among the rural population are to be encountered the simon-pure hysterics; from time to time, even, in some secluded village, an epidemic of hysteria recalls the classic features which obtained in the Middle Ages. Hysteria is the morbid psychic modification in certain individuals whose mentality is simple and naive, and who have been transported to conditions of existence for which they lack adaptability. The quota of country girls who develop hysteria after becoming servants in large towns, is recognized by many authorities. It is not extravagant to remark that the emigration from the country to the city, necessitating as it always does, efforts on the part of the individual to adapt himself to new conditions, constitutes an important factor in the development of the hysteria of today. Hellpach states that the hysteria of the proletariat is the result of socialistic aspirations, and is so widespread that a comparison of it with the hysteria affecting the masses of the Middle Ages, is both apt and proper.

The dissatisfied and the disenchanted who are still hosts to the simplicity of the psychic reactions of the child, have but one way of declaring their inability to cope with the exigencies of life—that is, by developing hysteria.—Interstate Medical Journal.

The Serum Treatment of Exophthalmic Goitre.

Harriet C. B. Alexander* discusses the subject and reports thirteen cases. Four principal theories of the disease have been advanced: (1) That it is due to disease of the sympathetic nervous system; (2) that the seat of the malady is the medulla oblongata; (3) that it is primarily a disease of the thyroid gland; and (4) that it is a neurosis.

Modern therapeutic measures have been largely based on the "thyreoid" theory. The results of partial strumectomy indicate that the successful removal of a portion of the thyreoid gland can lead to cure or to definite amelioration of the condition. On the theory that the thyreoid secretion normally neutralizes certain general metabolic poisons in the body, Moebius and others conceived of treating cases of exophthalmic goitre, in which there is presumably an excess of thyreoid secretion in the body, by introducing subcutaneously, or by the mouth, the serum of thyreoidectomized animals. It was hoped that the non-neutralized general metabolic poisons of such animals would nullify the toxic effect of the excessive thyreoid secretion. As to the treatment,

This box contains over half a billion disease-destroying germs

¶ In the box pictured are enclosed four dozen capsules, each of which contains, in a preparation called YOGURT, from ten to twenty-five millions of germs. These germs are of a harmless species, and their mission is to drive out of the system disease-producing bacteria, such as are always present in the intestinal tract in cases of *Intestinal Autointoxication*.

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¶ Hitherto this remedy has not been obtainable in this country. It may now be secured, freshly prepared and of superior quality.

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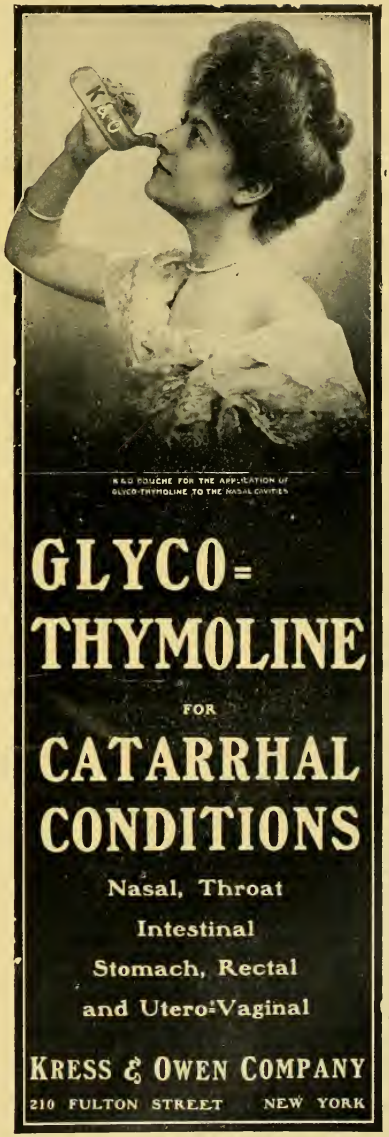

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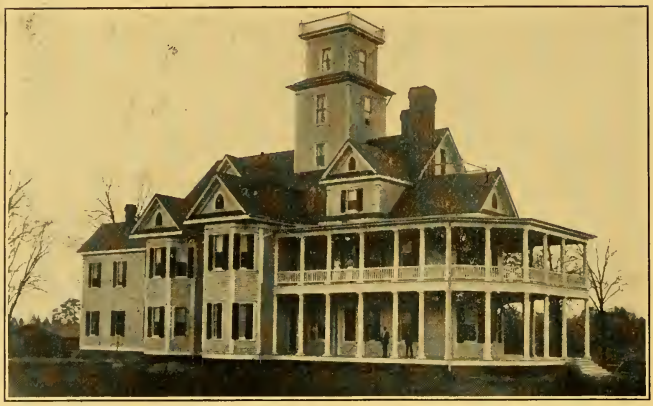

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experience has shown the great importance of general measures: complete rest for a time, fresh air, careful diet, mild balneotherapy, etc.

The name Thyreoidectin has been given to a preparation obtained under aseptic precautions from the blood of animals from which the thyreoid glands have been removed, and which is exhibited as a reddish-brown powder contained in capsules, usually five grains each. Carefully conducted clinical trials seem to show that Thyreoidectin can be depended upon to control the characteristic symptoms of exophthalmic goitre. In most cases the patient experiences much relief from the restlessness, tremors, insomnia and other nervous symptoms sc frequently present, and a gradual lessening of the frequency of the pulse rate, decrease in the size of the glands, and a diminution of the exophthalmos, with an increase of weight and a much better condition generally. The dose of Thyreoidectin seems to be one or more capsules after each meal, according to the judgment of the physician and the reaction of the patient.

In nine of the author's thirteen cases the size of the gland was materially reduced, and in every case improvement was observed with respect to one or more of the symptoms.

*The American Practitioner and News, August, 1907.

Cystogen-Lythia Tablets.

This effervescent tablet is of interest to physicians as it affords the means of employing the uric acid solvent and genito-urinary antiseptic properties of Cystogen, augmented by the alkaline and solvent action of the lithia salt.

The value possessed by the salts of lithia as uric acid solvent, diuretic and ant-acid are available in this preparation. It is a most happy combination, displaying all of the desirable effects of both Cystogen and Lithia. The effervescence brings about a quick solution in water, producing a perfectly tasteless solution. Water that is too cold retards the effervescence. It may therefore be conveniently taken at meal time in a full glass of water. In cases where this method of administration is contra-indicated, it may be taken between meals, always dissolved in considerable water.

These tablets being effervescent, need to be protected from atmospheric conditions, and for this reason are packed in glass

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tubes containing one dozen tablets in each. Three tubes are packed in a small cardboard box. A tube may be conveniently carried in the vest pocket, so that patients may be expected to take the medicine with regularity.

Relief in Rheumatoid Conditions.

Dr. Pettingill, of New York City, under the head of "Intestinal Antisepsis," reports some excellent experiences, from which the following is selected:

"Every physician knows full well the advantages to be derived from the use of antikamnia in very many diseases, but a number of them are still lacking a knowledge of the fact that antikamnia in combination with various remedies has a peculiarly happy effect. Particularly is this the case when combined with salol. Salol is a most valuable remedy in many affections; and its usefulness seems to be enhanced by combining it with antikamnia. The rheumatoid conditions so often seen in various manifestations are wonderfully relieved by the use of this combination. After fevers, inflammation, etc., there frequently remain various painful and annoying conditions, which may continue, namely: the severe headaches which occur after meningitis, a 'stitch in the side' following pleurisy, the precordial pain of pericarditis and the painful stiffness of the joints which remain after a rheumatic attack—all these conditions are relieved by this combination called 'Antikamnia and Salol Tablets' containing 2½ grs. each of antikamnia and of salol, and the dose of which is one or two every two or three hours. They are also recommended highly in the treatment of cases of both acute and chronic cystitis. The pain and burning is relieved to a marked degree. Salol neutralizes the uric acid and clears up the urine. This remedy is a reliable one in the treatment of diarrhoea, entero-colitis, dysentery, etc. In dysentery, where there are bloody, slimy discharges, with tormina and tenesmus, a good dose of sulphate of magnesia, followed by two antikamnia and salol tablets every three hours, will give results that are gratifying."

The Use and Abuse of Cardiac Stimulants—Hare, Therapeutic Gazette.

"In this article the author discusses the common disregard of certain essential details concerning the action of cardiac stimulants. Physicians themselves probably suffer more as a class from this abuse. The "tired heart" commonly existing among physicians usually receives at their hands excessive doses of digitalis instead of the indicated rest. Strong coffee and other adjuncts are also self-prescribed, causing an increase of the cardiac disorder. Another erroneous use of cardiac stimulants is their employment in a state of undue excitation in which condition cardiac sedatives are needed. Not uncommonly cardiac irregularity calls for small doses of aconite or veratrum viride. Again a patient with a feeble heart receives digitalis, when in reality the cause of the feebleness lies in a degenerated heart muscle, which is incapable of gaining any advantage from this drug. In fact by contracting a blood vessel digitalis increases the labor of the heart. Under these circumstances strophanthus or cactus, the action of which is cardiac, but slightly if at all vascular, should be used." —Interstate Medical Journal. This is one of the numerous instances in which cactus is advantageously used. The expressions of the medical profession on Cereus Grandiflorus and Cactina Pillets, which truly presents the therapeutic properties of the drug in the highest form, are very encouraging. It seems that any drug that offers assistance in cardiac complications, and especially if it is devoid of the objectionable features of stronger cardiac remedies, should command the earnest attention of the bedside practitioner.

The First Meeting of the Southern Medical Association.

The first annual meeting of the Southern Medical Association, the Southern and Gulf Branch of the American Medical Association, met in the rooms of the Jefferson County Medical Society at the City Hall in this city at 11 a. m. Sept. 24th ult. A fair attendance of doctors from the States of Alabama, Georgia, Louisiana, Mississippi and Tennessee were present.

The President, Dr. H. H. Martin, of Savannah, Ga., not having arrived, the first session was presided over by Vice-president, Dr. Mack Rogers, of Birmingham. Appropriate addresses of welcome were delivered by Alderman J. R. Copeland, representing the mayor of Birmingham, Secretary Joseph B. Babb, of the Commercial Club of Birmingham, and Dr. B. L. Wyman, President of the Jefferson County Medical Society. Dr. Jere L. Crook of Jackson, Tenn., responded very beautifully on behalf of the Association.

The Association is composed of three sections, medicine, surgery and ophthalmology. Most interesting programs for each section had been arranged, and very interesting papers were read in each section. The scientific meetings of the sections on medicine and surgery were held together, alternating with a paper from each section. We give our readers a few of the papers in this issue of the Journal, and hope to give others

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The success of Fellows' Syrup of Hypophosphites has tempted certain persons to offer imitations of it for sale. Mr. Fellows, who has examined samples of several of these, ***finds that no two of them are identical,*** and that all of them differ from the original in composition, in freedom from acid reaction, in susceptability to the effects of oxygen when exposed to light or heat, ***in the property of retaining the strychnine in solution,*** and in the medicinal effects.

As these cheap and inefficient substitutes are frequently dispensed instead of the genuine preparation, physicians are earnestly requested, when prescribing the Syrup, to write "Syr. Hypophos. ***Fellows.***"

As a further precaution, it is advisable that the syrup should be ordered in the original bottles; the distinguishing marks which the bottles (and the wrappers surrounding them) bear, can then be examined, and the genuineness—or otherwise—of the contents thereby proved.

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For the treatment of Alcoholism and Drug addictions. Morphine, Cocaine, etc.

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Session of 1907--1908.

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later as our space permits.

The social features of the meeting were by no means insignificant, and were apparently enjoyed to the fullest degree by the visiting doctors. A delightful social program had been arranged by the committee of local physicians with Dr. W. P. McAdory as chairman. It comprised a smoker at the Hillman Hotel on Tuesday evening, the 24th, a barbecue at the Country Club, followed by a trolley ride over the city and district, ending in a visit to the steel plant at Ensley, on Wednesday, the 25th.

The address of the President, Dr. H. H. Martin, was the feature of the session Wednesday evening. On Thursday the constitution was adopted, the report of the councilors was made, and the officers for the ensuing year were elected. The officers elected are as follows: President, Dr. B. L. Wyman of Birmingham, Ala.; Vice-president, Dr. W. P. McAdory of Birmingham, for Alabama; Dr. H. M. Fowlkes, of Biloxi, for Mississippi; Dr. Frank Watson of New Orleans, for Louisiana; Dr. G. R. Holden of Jacksonville, for Florida; Dr. R. Wallace of Chattanooga, for Tennessee; and Dr. A. L. Fowler of Atlanta, for Georgia; Secretary-Treasurer, Dr. Oscar Dowling of Shreveport, La.; Sectional Officers—Medicine, Dr. Seale Harris, Mobile, Ala., Chairman; Dr. H. E. Mitchell, Birmingham, Ala., Secretary; Surgery—Dr. W. F. Westmoreland, Atlanta, Ga., Chairman; Dr. Jere L. Crook, Jackson, Tenn., Secretary; Ophthalmology—Dr. J. F. Herron, Jackson, Tenn., Chairman, and Dr. A. B. Harris, Birmingham, Ala., Secretary.

President Wyman announced the appointment of Dr. W. W. Butterworth as councilor for Louisiana and will name the councilor for Florida later.

The councilors who hold over are: Dr. George C. Savage, Nashville, Tenn.; Dr. D. F. Talley, Birmingham, Ala.; Dr. Michael Hoke, Atlanta, Ga.; and Dr. W. W. Crawford, Hattiesburg, Miss.

Atlanta, Ga., was selected as the place of meeting for next year, which will be the second Tuesday in November, 1908.

The unqualified success of this, the first meeting of the Association was very gratifying to the members, and they look forward to great future usefulness of the Association. —Alabama Medical Journal.

The Milliner's Feather Duster.

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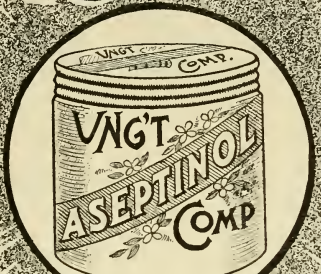

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Animal Therapy: Its Relation to Immunity in the Treatment of Tuberculosis.

In a forty-page monograph the author reviews the work done by himself and other physicians, who aided him in his laboratory and clinical experiments.

Having been a pupil of Metchnikoff at the Pasteur Institute, Paris, Dr. Sweeny became deeply imbued with the doctrine of phagocytic defence in seeking for an immunizing agent with which to free the human organism from the tubercular germ.

Subsequent work with Prof. von Behring in Germany convinced the author that it was possible to render young domestic cattle immune to tuberculosis by inoculating them with a sterile emulsion containing tubercular bacilli, this emulsion being injected into the jugular vein.

After demonstrating that this acquired immunity could be transmitted to other cattle, whether they were healthy or already tuberculous, by inoculating them with the lymph drawn from the thoracic duct of the immunized animal, Dr. Sweeny proceeded to inoculate tuberculous patients in a like manner. For five years the author and his colleagues continued their experiments in America and Europe before he announced the results of their work in his monograph upon the subject.

Dr. Sweeny does not claim that his remedy, which he has called "anti-tubercular lymph," is a specific for all forms of tubercular infection, but he states that where the blood of the patient has not been seriously depleted by the operation of the tubercular bacillus, remarkable results may be looked for.

Even in cases where pulmonary cavities of considerable size have existed previous to the administration of the lymph, some of his most brilliant results have been obtained. The remedy is injected hypodermically in the subscapular region in doses ranging from ten to twenty minims daily. No unpleasant reaction is observed. The influence of the lymph upon the opsonic index is prompt and unmistakable. Night sweats and excessive expectoration, as well as the acute pleuritic pains, are controlled even in cases which go on to a fatal issue.

The results reported in Dr. Sweeny's monograph are of sufficient interest to warrant a careful reading of his article, which also deals with the subject of immunity and infection in an interesting and original manner.—Dr. Gilliford B. Sweeny, Pittsburg, Pa.

The Prophylaxis of Scarlatinal Nephritis.—Thompson (Edinburgh Medical Journal) reaches the following conclusions:

Scarlatinal nephritis is a distinct part of the disease, and should not be looked upon as an inevitable sequela, which presents itself in a certain percentage of cases; and as such it should be open to treatment.

The only form of treatment that is likely to be of any real value in counteracting the nephritis is the prophylactic, the object being to kill outright, or to weaken the virus by a substance which is in itself harmless; and as the virus is in the general circulation at the beginning of the disease, it must perforce be present in the kidneys and urinary system.

With regard to the use of a prophylactic drug against the nephritis of scarlatina, the only one thus has proved itself to be of any value is urotropin. It is true that urotropin has the distinct advantage of being used in cases in August and the first eighteen days of September, which is a time that the nephritis percentage is usually low. But the fact that of the forty-seven consecutive cases treated with urotropin not one had nephritis, and only one had albuminuria, is, in the author's opinion, encouraging enough to suggest the further use of the drug in scarlatina.

And therefore, finally, he suggests that all cases of scarlatina should be treated from the beginning with five grains of urotropin thrice daily for children up to twelve years, and for patients above that age 7½ grains thrice daily. In the administration of the drug, the importance of dilution with water must not be overlooked; and the author recommends that the treatment should be continued to the end of the twenty-eighth day of the disease.

Pneumonia in Children.—Taylor (Brit. Journ. of Children's Diseases) takes up the various phases of pneumonia in children: (1) The relative frequency of lobar and broncho-pneumonia; (2) the mortality and

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Charles Marchand

Chemist and Graduate of the "Ecole Centrale des Arts et Manufactures de Paris" (France).

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prognosis of the two conditions, and (3) treatment. It consists of a resume of the recent literature by various prominent pediatrists together with a series of his own at Guy's Hospital, followed by his own deductions from the whole.

(1) After pointing out the fact that all these writers agree that it is necessary to show that lobar pneumonia is far more frequent in infants than is commonly supposed, he quotes among many others Morse, of Boston, and his own countryman, Clive Riviere. The former had a large series in which lobar pneumonia occurred three times to broncho-pneumonia's once, while in Riviere's series the reverse was true, three cases of broncho to one of lobar. From these and other discrepancies Taylor concludes that lobar pneumonia occurs in infants much more frequently than was the current belief a few years ago, that there are probably considerable differences in the incidence of the two forms occurring at different times and in different places, possibly liable to variations from epidemic or other considerations; that broncho-pneumonia is very much less frequent after three years of age.

(2) Of prognosis he says he would not attach too much importance to the fact that many writers report a far greater mortality in broncho than in lobar pneumonia, be-

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cause of the enormous variations in different places and at different times. Therefore very little reliance could be placed on the recovery of an individual case if the mortality of that particular time and place happened to be the 27 per cent. of one writer instead of the 1 per cent. of another quoted. In the same way he concludes that the leucocytosis may fail us as it often does in our individual case. Of lumbar puncture he says the results so far have not been very helpful.

(3) As to treatment, he says the analogy of treatment in other acute infectious diseases would not lead us to use the cardiac depressants, aconite, antimony and veratrum viride. Expectorants can be of only secondary importance in lobar pneumonia where the fibrinous deposit is absorbed, and not spat out. In broncho-pneumonia it has been his practice for many years to use expectorants almost exclusively, ipecac and ammonium carbonate, believing it to do more good by modifying the secretions than by driving those already formed out through the larynx. He thinks the present generation will be exposed to as much criticism for treating a case in a cold room with the temperature at 28 deg. F. as the former generation now is for the "coddling system" where the child was confined within four canvass walls deluged with the vapor and steam of boiling kettles close by.

Movable Kidney.—Mackenzie's (Lancet) observations on movable kidney are based on some 3,900 examinations. He defines the condition as one where the examining hand can get completely above the upper end of the kidney. Where only the lower end of the organ can be felt, it is said to be "palpable." Of 2,801 women of all ages, the kidneys were palpable in 449 and movable in 515. Of 1,067 men of all ages, the kidneys were palpable in 25, and movable in 11. In no case were the kidneys movable under the age of twelve years. Of 99 female children under twelve years of age, the kidneys were palpable in ten. Over the age of twenty-two years there is a great increase in the proportion of cases. After the age of thirty-seven years the proportion declines again. Among males, no case of movable kidney was met with under the age of twenty years, and the highest proportion occurred between the ages of thirty and forty years. Among the causes of abnormal kidney mobility the influence of corsets, tight lacing, and dress has been considered as important. Laxity of the abdominal walls cannot play an important role, for its most important cause, repeated child bearing, has no influence. Probably absorption or atrophy of the perirenal fat is influential, and mobile kidney is certainly met with more often in wasted individuals. But sex is the most important factor in causation, and it may be that the increase in volume of the kidney at the menstrual period plays a part. The right kidney is more often displaced than the left, because the liver tends to displace the right, the pancreas to support the left. The rarity of movable kidney in children is probably due to the fact that the tissue of the capsule of the kidney until the tenth year is simply areolar and does not become filled with fat until after that age. In 411 out of 515 cases there were no symptoms which could be attributed to the kidneys. In the remaining 104 cases, the symptom almost invariably present was pain, usually referred to the right lumbar region behind, but sometimes more to the middle or all round the back, sometimes to the right hip or thigh or down the leg, sometimes in front to the right iliac fossa, sometimes to the epigastrium, sometimes to the ovarian region or to the groin. The pain was usually of a dragging or dull aching or bearing down character, but sometimes stabbing or knife like. It is not coustant as a rule, but comes and goes, and may be induced or aggravated by coughing. It is usually much relieved or disappears entirely on lying down. All kinds of nervous symptoms have been attributed to movable kidneys, even locomotor ataxia. Dislocation of the kidney may take place more or less suddenly, following lifting or straining, etc. Most cases having no symptoms, require no treatment. Attacks of pain of only occasional occurrence are best treated by rest in the position which the patient finds most comfortable—namely, on the back or on the side of the affected organ. The local application of heat by means of hot water bottles, or hot fomentations, and the use of preparations of belladonna are useful in relieving severe pain. When the pain is wearing and persistent, rest in bed for some time should be insisted on. In thin and neurasthenic subjects, the general condition and nutrition should be bettered. With prolonged rest, good feeding, and massage, the kidney may settle down into its proper condition and with an increase of the body fat be better supported when the patient gets around again. A pad and bandage often helps a great deal, but most of the kidney belts are cumbrous and unsatisfactory. The most efficient apparatus is of the nature of a spring truss, the kidney being kept in position by properly applied pressure of the spring.

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by the community in its fight against tuberculosis: 1. Municipal dispensaries. A dispensary to furnish information and treatment to consumptives should be established in every populous centre. This would be the basis of a bureau of information to the authorities. 2. Health visitors. Health visitors in every district, by careful inspection of dwelling houses, would soon discover cases of tuberculosis. In advanced cases proper isolation could be provided, or measures taken for compulsora removal. 3. Regulations against tuberculous persons handling food. Consumptives should be prevented by law from keeping dairy farms, attending to dairy cattle, or having anything to do with the handling of meat, milk, or any other article of food—more especially persons suffering from "open" tuberculosis of the hands or face. 4. Inspection of meat and milk. An enormous amount of tuberculosis is due to the feeding of children with uncooked tuberculous milk, and little can be hoped for until a thorough and organized attack is made on tuberculosis cattle. The widest powers of exclusion of tuberculous milk should be given to the health authorities. 5. Improved dwellings, ventilation, air space. Special attention must be paid to obtaining the above and especially to the prohibition of overcrowding. 6. Destruction of expectoration. Regulations against spitting in covered places should be strictly enforced. Spittoons might be supplied by the health authorities to those too poor to purchase them. 7. General sanitary measures. This includes all measures necessary for the stamping out of the scourge. 8. Disinfection of houses. This is absolutely necessary, not only to destroy the germs, but also for purposes of education. 9. Inspection of hotels and boarding houses. No room which has been occupied by a consumptive should be again occupied until thorough disinfection has been performed. 10. Separation of children from consumptives. Children being very susceptible should never be allowed to associate with consumptives. 11. Isolation of advanced cases. The advanced consumptive with copious expectoration is the most dangerous factor in the spread of tuberculosis, and he should be removed from his home when not properly isolated. 12. Hospitals for treatment. These are of the greatest necessity, and every town should have a sanatorium for the early cases. 13. Voluntary notification. This ought to be universal, and should be made compulsory in the case of public institutions. But notification by private physicians should remain nominally voluntary.

Extrauterine Pregnancy in Madagascar.—Moss (The Journal of Obstetrics and Gynaecology of the British Empire) says that very soon after commencing practice in Madagascar, eighteen years ago, the question of extrauterine pregnancy forced itself on his attention by the fact of his having missed the diagnosis in an advanced case. Having been ever since especially alive to the possibility of meeting with this condition, he has recognized that it is of comparatively frequent occurrence. The Malagasy belong to the Malay family, and their women are for the most part short in stature and delicate in frame. They commence to menstruate about the age of twelve and frequently marry between twelve and fourteen. It often happens that in respectable families a girl is allowed to marry immediately after the onset of puberty, in order to obviate, if possible, the risk of moral lapses likely to cause diesase and sterility. There is, however, a very great amount of sexual immorality in both men and women, which is one factor explaining the great frequency of diseases of the reproductive organs. In women, endometritis, chronic pelvic peritonitis, and inflammatory affections of the tubes and ovaries with adhesions, are all very common; carcinoma is occasionally seen, and fibromyoma is frequent, the latter having been diagnosticated in as many as 16 of all the patients seen in one year. Pelvic cysts are also not uncommon. Many causes tend to induce inflammation in the genital tract, such as gonorrhœal infection, sexual excess (even sometimes during menstruation and the puerperium) and want of care after abortion and labor. Two or three days' rest after an abortion is often thought sufficient. There is therefore a great sphere for the inculcation of proper hygienic principles. The author does not state the total of his obstetrical cases, but concludes that he has had sixty-seven cases which have occurred almost entirely in the practice of one medical man during fifteen years and among a small population. Tananarive itself, where probably three-quarters of the cases originated, being a town of only about 60,000 inhabitants. Other physicians in the district have noted cases, though not to an equal number.

Novel Surgical Expedient for the Removal of Ascites—Ruotte (Lyon medical) reports the performance of a novel operation, consisting of transplanting the internal saphena vein to the peritoneal cavity, in order to carry off ascites. The patient, sixty-two years of age, came into the hospital for treatment for a very large abdominal effusion. She had a history of malarial infection and of alcoholic habits, but there was no syphilitic trace. Present sickness

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began six months before admission, on January 22, 1907. She had dyspepsia. She had lost flesh, and was much emaciated. The abdomen was very large, and covered with large veins. On account of œdema of the legs, she could hardly go about. Urine was not albuminous and free from sugar. There had been no jaundice. On January 23rd, she was tapped and thirteen litres obtained of a lemon colored fluid; but by the 26th the abdomen had refilled and she was again relieved of nine litres. The liver was found to be small; the spleen was not palpable. Ruotte decided to perform a novel operation, which he had devised, but had not previously executed. It was the transplanting of the internal saphena veins into a peritoneal incision in the hope that these vessels would carry off the ascites. The operation was performed on the right side, on January 29th. An incision was made in the thigh in the course of the saphena, which was cut at a distance of eight centimetres from its termination. Its inferior end was tied, and the superior fragment was dissected free up to the cross, and laid back above after having been bevelled, for the extent of two centimetres, upon its anterior face, which was designed to make it correspond with an incision to be made in the peritoneal cavity, so that the vein could be sutured to the serous membrane. The external incision was prolonged above the crural folds; and the walls of the abdomen divided as well as the peritonæum, to the length of two centimetres. From the opening seven or eight litres of serosity escaped. The bevelled edges of the vein were then carefully sutured with catgut ligatures to the border of the peritoneal wound. When the suturing was complete, the musculo-aponeurotic layers were sutured together above, and finally the skin. There was no drainage tube placed in the incision. Healing proceeded without incident, and the ligatures were removed on the eighth day, leaving complete union. The ascites was not reproduced, and the legs were no longer swollen. The patient was allowed to get up on the twentieth day after the operation. She was discharged in good health July 21st; at this time the ascites had not returned, and her legs did not swell after walking. (The title of this communication states that the operation was done on the "external" saphena, which is obviously an error). Since reporting this case the author has performed a double operation upon the saphena veins of both sides simultaneously, with the same successful results upon the ascites and œdema of the extremities. In a third case, complicated with heart lesion, the patient died suddenly on the third day after transfer of the left saphena vein to the peritonæum. At the autopsy, a slight funnel shaped depression was seen in the peritonæum, admitting a probe, which penetrated with great facility to the femoral vein. The union was perfect. Only a few spoonfuls of effusion were found in the peritoneal cavity. The liver was in an advance l stage of cirrhosis.

Digestion and Feeding in Infants.—Fordyce (The Scottish Medical and Surgical Journal) discusses the effects of various degrees of heat upon cow's milk, and with the effects of sodium citrate. Three degrees of the heating process are spoken of: Pasteurization or heating to 70 degrees C. for twenty minutes, scalding or bringing to the boiling point, and prolonged boiling. By Pasteurizing we destroy the lactic acid bacteria and most of the pathogenic germs of the infectious diseases, while tubercle bacilli, spores and fermenting bacteria survive. It is therefore of use (even when not contaminated later) only when done immediately after milking, and used within six hours. In scalded milk all but spores are destroyed, while milk kept at 110 deg. C. for 15 minutes is absolutely sterile. Eighty-nine rats 21 days old were divided into four groups and fed on four different milks, viz., bread and milk, raw milk, pasteurized milk and boiled milk, and their progressive weights tabulated for 42 days. The results were entirely negative as all did equally well. The thyroid glands of those fed on pasteurized and boiled milk were pale, and microscopically showed variations from the normal.

Upon the addition of rennet the four milks pasteurized had a more flocculent curd than raw milk, scalded milk still more so, and boiled milk most of all. The artificial digestibility, as shown by the addition of pepsin, and acids at body temperatures, was diminished in pasteurized milk, and still more so in scalded and boiled milk. This, however, is of less importance when he reminds us that the flocculent curds more readily pass through the pylorus to be digested. Fats are little altered in pasteurized, and scalded milk, but the emulsion is destroyed in boiled milk and the fat globules run together. The ferments are probably destroyed by all three degrees of heat, the importance of which is not yet definitely settled. There is no evidence that any of the degrees of heat cause either rickets or scurvy. However, the author finally states that it is his opinion that clinically the general health and development is better in infants fed on raw milk.

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A Review of Recent Neurological Surgery.

Armour (The Practitioner) quotes at length Cushing's paper concerning surgical intervention for the intracranial hemorrhages of the new-born. This paper, dealing particularly with the so-called birth palsies, points out that the hemorrhage is usually of venous origin and follows the rupture of some of the delicate and poorly supported radicles of the cerebral cortex. It may be due to great trauma or to a strain upon the vessels by the venous stasis of postpartum asphyxiation. The vessels most likely to be ruptured are those which ascend over the cortex and render the longitudinal sinus in the midcerebral region. Those veins, which lie in the subarachnoid space and for the most part are protected from rupture by following the sulci as they ascend toward the middle line, leave this protection when near the vertex, and, apparently with no support whatever, cross the subdural space to enter the dura at the outer edge of the sinus. In infants these unsupported vessels are the only connection between the leptomeninges of the hemispheres and the dural sheath underlying the sinus.

Although the cranial molding may take place to a considerable extent without putting any great strain on these lateral cerebral veins, any undue overlapping could readily tear one or more of them away from the sinuf. In this way Cushing accounts for the fact that the primary effusion, and therefore the thicker portion of the clot, is commonly median, and indicates primarily and most seriously the centers for the lower extremities. The extravasation he holds is usually limited to one side, though it may be bilateral, nor should the condition be difficult to diagnose. Should there be any serious doubt as to the actual nature of the lesion it might be decided by lumbar puncture, when free corpuscles will be found in the fluid of the lumbar meninges. This would serve to differentiate between hemorrhagic and infectious cases, where diagnostic difficulty is present. A history of difficult labor or of postpartum asphyxiation has an important bearing upon diagnosis. Among the objective signs is bulging of the fontanels—indeed, they may be so tight as to show no pulsation. Convulsions are frequent, and if they do not appear for several days after birth may be unilateral. There may also be an undue reflex activity, the child starting or twitching in a convulsive way in response to any sensory stimulus. Ocular palsies or inequality of the size of the pupils are not uncommon. Medullary symptoms are sometimes observed, such as alterations from the normal in the cardiac and respiratory rhythms. Evidences of paralysis are rare. According to Gowers two-thirds of the cases exhibit in their terminal aspects epilepsy, even when their intelligence does not suffer. Convulsions are often Jacksonian in character, akin in all respects to those which follow the cortical changes resulting from criminal injuries with hemorrhage in adult life.

Cushing's report covers four cases. He raised an osteoplastic flap, including the entire parietal bone, exhibiting a plum-colored dura which on being opened disclosed a clot. This was lifted off in large pieces from the exposed area of the cortex, and a considerable quantity of clotted blood, which extended over the frontal and occipital regions, was irrigated out with warm saline solution.

In another case the operation was done on both sides. Cushing believes that a new-born child, with a proper regard for hemostasis and careful avoidance of exposure, will stand a cranial operation well. He notes that coagulation time is as rapid as in the adult, and holds that since the operation of craniectomy in the newly-born child is comparatively free from the immediate risk of death the procedure is well worth adopting, in view of the crippling later consequences of meningeal birth hemorrhages.

The author further quotes Sachs's paper on "Indications for Operative Treatment in Serious Head Injuries," giving as a contribution to modern cerebral surgery this illuminating sentence: "If the external evidence points to one side and the symptoms to the other, consider both, take the side of external injury first, but try to reach the other as well."

Bullard is further quoted to the effect that operation should be performed in adults whenever the unconsciousness, after severe head injury, lasts more than twelve hours, and when it seems clear that the unconsciousness is due to an injury and not to alcohol or other causes, or complications. He admits, however, that this rule is not universal, while Walton is of the opinion that the following symptoms in themselves are not sufficient to justify operation: (1) Continued unconsciousness, not deepening; (2) paralysis appearing immediately, and not increasing; (3) inequality of pupils;

(4) delirium and restlessness; (5) the presence of fever. Among the conditions indicating operation he included: (1) Deepening initial unconsciousness, or unconsciousness coming on after an interval, and deepening into coma; if no other localizing sign accompanies, the seat of injury should be chosen for operation. (2) The spread or increase of initial paralysis after an interval. This points to hemorrhage. In the presence of this condition, the possibility of bruising and edema alone being present does not suffice to contraindicate operation. (3) Jacksonian attacks. (4) Dilated pupil on one side, accompanied by paralysis or spasm upon the other (middle meningeal hemorrhage). (5) Punctured or definitely depressed skull. (6) The question whether simple fissures and moderate depressions of the skull require operation demands surgical rather than neurological judgment. The benefit of the doubt should be given to operation, in view of the many cases in which exploration of such injuries reveals widespread and serious conditions likely to prove a future menace.

What Can the Family Doctor Do for the Inebriate!

Bolton (British Medical Journal) would begin the treatment of alcoholism with a hypodermic dose of apomorphine, even if the patient is delirious. He will quiet down and go to sleep with perhaps antecedent vomiting. The next step is to determine whether the man wants to give up alcohol or simply to get straightened out. Patients cannot be cured against their will, but sometimes new hope may be put into them and they can be shown that a permanent cure is perfectly possible. Combinations of atropine and strychnine may now be used, also hypodermically, two or three times daily. For a stomachic capsicum and cinchona tinctures are recommended, preceded if necessary by a calomel purge. Albuminuria is no contraindication of the foregoing. In fact, the urine often clears up under the treatment. As the general condition improves the frequency of the injections should be lessened. Depression and despair pass away. The nerves are steadied and appetite returns. It is needless to say that such a treatment can be carried out only under strict regular medical supervision. The patient must be warned against overconfidence. If he becomes restless he should at once submit to a brief renewal of treatment. A relapse is not more difficult to treat than any original attack. Old, harmful associations must be broken up and the mind and body both occupied in useful work and healthy recreation.

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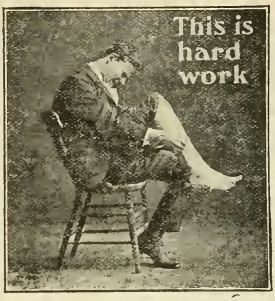

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To What Extent Should we be Conservative, to what Extent Radical with our Surgery in the Treatment of Ovarian Diseases?*

By Dr. J. F. Highsmith, Fayetteville, N. C., Surgeon Highsmith Hospital.

This is a subject which has been, and is of great interest to the gynecologist—and in fact to the profession at large. As the years roll by and the pendulum of opinion, moved by personal experience, swings to the extreme right and left, I occupy a mid-position. Each case requiring individual treatment. We learn and with experience unlearn—cancel many methods and adopt new ones which we hope to be more lasting. I shall briefly take for my guide an experience gained from perhaps five hundred laparotomies for ovarian diseases. Not going into detail with each case, but using briefly illustrative cases from these. I shall state facts as I have observed them in *my* experiences. Trusting the same may elicit a free discussion with much knowledge gained for myself and relief to future patients.

In the first place I try to be conservative in my work in a true sense. The object of all surgery is to *save* life, to *restore* function, and *relieve* suffering. A diseased and functionless ovary should be removed if health is impaired and the condition of the ovary cannot be improved by surgical work. Whenever it is possible to restore true function to an organ it should be done. This can often be accomplished by breaking up adhesions, evacuating corpus luteum cysts, and cysts of the graafian follicles, and the excision of the small hematoma of the ovary, etc. We must feel satisfied that the effort to save a portion of the ovary is for the best interest of the patient considering her interest, her position in life, her married relations, and other circumstances bearing upon her welfare.

No gynecologist should do an injustice to his patient by robbing her of an organ when he has an assurance of being able to help her back to health by conservative treatment. It is equally unjust to the patient to try to save an organ which is either a menace to her life or a source of invalidism. We must endeavor to be honest, considerate and thoughtful toward our patient, and if we follow these lines we will make no mistake of heart and few of head in handling these troublesome intrapelvic conditions. Whenever in doubt as to what is best to do give the patient the benefit of the doubt and the chances are we will make fewer mistakes. True in quite a number of cases after doing conservative operations on the appendages it has been necessary to resort to a second operation. But when one remembers the pitiful wrecks that are often seen where radical operations have been done early in life he hesitates a long time before completely removing the pelvic contents. The old German adage "Qui bone diagnoscit, bene curant," is evert true. We must diagnose our cases well, then we shall cure well.

We must first thoroughly study our case and with all things taken into consideration try to be *sure* of our diagnosis. There are quite a number of cases where after using hot douches and building the patient up all symptoms of ovarian disease disappear. Or if not entirely relieved they will go along comparatively comfortable. I have treated many such cases. To report each case thus treated would grow tiresome but to illustrate I briefly cite the following cases:

Mrs. J. D., white, age 38, mother of five children, came in the hospital extremely nervous, much run down in every way. Youngest child two years old. Gave a history of having suffered after the birth of the child, had fever and did not convalesce satisfactorily, looked as though she had suffered from infection. She had been a physical wreck ever since this attack. An examination showed the right ovary much enlarged and prolapsed, with a great deal of thickening of the right broad ligament—endomentritis also present. This case was thoroughly curetted, kept in bed for four weeks, using tonics and hot douches daily. She steadily improved and was discharged from the hospital at the end of five weeks. While she has not become pregnant since, now four years since the birth of the last child, she is active in her domestic duties and reports that she is feeling first-class.

Mrs. J., white, age 30, married for five years, consulted me. Anæmic, nervous, constipated, etc. Gave a history of suffering greatly from leucorrhœa and dysmenorrhœa, periods irregular. On examination the uterus was found to be in position with a prolapsed left cystic ovary, very painful on pressure. She would not consent to have the ovary removed, which was my best judgment should be done. She had been advised by other surgeons that it should be removed. I gave her tonics, regulated her

*Read before the North Carolina Medical Society at Morehead City, N. C., June 1907.

secretions, kept her quiet, dilated and curetted, and used hot douches daily. She greatly improved in health. A short while afterwards became pregnant and gave birth to a living child, much to her delight. She has been well since, up until the past spring when she consulted me again, somewhat run down in health. I found the ovary in very much the same condition as four years previous, but no worse.

I could cite many other cases similarly treated with results equally as good. Please do not understand me to be an advocate of pessirus, hot douches and tampons, but we do have cases sometimes where we are forced by the patient to resort to this kind of treatment, with results not so bad after all, but rather encouraging sometimes.

Where acute pelvic abscess is present evacuation of the purulent material per vagina is found to yield most satisfactory results and it is not necessary to remove the appendages. In this class of cases I call to mind numerous cases drained per vagina with best of results—it only being necessary to go in through Douglass' cul-de-sac, letting out the pus and setting the patient at an angle of 45 degrees. These cases usually have many adhesions but they seem to take care of themselves. One of these cases opening the abscess per vagina and she clear of fever for several days with no signs of further inflammatory trouble, requested that I make an incision and examine her ovaries. She and her husband would feel much better satisfied if the ovaries were removed—she having had several miscarriages with most alarming complications. I consented to do the exploratory incision. On entering the peritoneal cavity from above I found the fundus of the uterus with the aedonexer on each side a perfect mass of adhesions to the bowels. I was plainly in trouble. There was nothing left for me to do but make a complete removal of the uterus with the appendages. The woman came very near dying, for she was critically ill. She got well, to my joy, but I quietly decided in my own mind that the next case of this kind would not be operated upon for the removal of the ovary or ovaries so soon after having drained an acute pelvic abscess per vagina.

In bad inflammatory infections non acute where no abscess has walled itself off, and it is impossible to drain through the vagina, I think it a mistake to act conservatively. These cases do better to remove the ovary complete. My experience has been where the pathological changes come from a chronic inflammatory lesion it is not wise to leave any portion of the ovary for it will give further trouble. Hence in the end it is more conservative to remove than leave behind any portion of such an ovary. The same holds true if the ovary has undergone disintegration from specific trouble.

Mrs. I., age 30, mother of one child six years old, consulted me, giving a history of suffering continuously from her periods, constant pain and soreness over both ovaries, with periodical chills, with fever to follow. On examination I found both ovaries much enlarged, very sensitive. After opening the abdominal cavity both ovaries were found to be thoroughly disorganized with very small portions of healthy ovarian tissue, tubes healthy. I removed both ovaries complete. There being so many adhesions I drained for forty-eight hours through the abdominal wound. The patient made an uninterrupted recovery, has had no further trouble and has been perfectly well ever since.

Mrs. B. consulted me at the same time and suffering very much in the same way as Mrs. I. On opening the abdominal cavity I removed the right ovary, broke up a good many adhesions about the left, and she being so extremely anxious for children I left the left ovary. Six months later she returned suffering as badly as ever. On examining per vagina I found the ovary I had left twice the size as six months previous. I advised the removal of this ovary and the patient consented. She made an uneventful recovery. Went along for three or four months in my absence extremely nervous, almost crazy. When I returned home she told me there was something else dreadfully wrong. On examining her I found absolutely nothing and so informed her. She got out of bed and since then has been in perfect health. I draw the following conclusion from this illustrative case: When the ovaries are densely adherent, necessitating more or less mutilation in freeing them from a vicious portion, it is better to remove them than to follow conservative principles. Further, that the greater the diseased condition of an ovary the less the suffering of a nervous character following the removal of the ovary.

Cysts of the graafian follicles and the corpus luteum cysts fortunately are not removed nearly as frequently as formerly. Many good ovaries have been removed. It is hard to tell in many instances just where to draw the line. The mere fact that four or five large graafian follicles are present in the same ovary is no indication whatever for the removal of the ovary—the only thing that is necessary is to puncture the cysts, that is if the remainder of the ovary not occupied by the cysts is apparently healthy. If on the other hand the capsules show considerable thickening and there are evidences of other cysts forming I think it best to ex-

tirpate the ovary. And I must say here that where it is necessary to resect a portion of an ovary careful operative technique is very important. The surgeon should use, if possible, continuous sutures of the finest catgut, instead of interrupted ones. Where there are many ends of sutures lying free there is always a possibility of the intestines or omentum becoming adherent, giving rise to subsequent trouble.

Mrs. L., white, married, age 30, mother of one child five years old, consulted me. She was delicate, suffering greatly at her periods, dragging pain, could not walk, nervous, gradually losing flesh. On examination found the left ovary much enlarged with a general relaxation of its ligaments. January 15th I removed this left ovary and she left the hospital three weeks afterwards in good condition. The right ovary at this time, to all appearances, was healthy with the exception of two or three small cysts, which were punctured. She held her own, gaining in flesh and general tone—periods regular until January, 1906, two years after the first operation, at which time she began to be irregular. Continued to suffer with bearing down pains in the lower pelvis. On examination I found the right ovary much enlarged, and she requested that I remove this ovary, which I did in November, 1906. Since the removal of this ovary she has not been nervous, her periods have not returned, which has given her a rest. She has gained twenty pounds in flesh and thus far enjoys good health.

Mrs. W., white, age 30, mother of two children, consulted me January, 1903. On examination the right ovary was found to be much enlarged—absolutely cystic. Two days afterwards the ovary was removed. The left ovary had one cyst of considerable size which was removed. This patient was a nervous wreck. After the operation she speedily recovered, has been a hard worker ever since, enjoying perfect health, regular at her periods. Two years after the operation gave birth to child at term with no complications.

Now with these two cases who could tell just how far to be conservative, but it seemed to me the best thing to do was to give the patient the benefit of the doubt.

Hematoma of the ovary if of large size we had better extirpate—if of small size excision. An interesting case came under my care May, 1903. Miss A., age 20, consulted me for what she had been told was a retroversion of the uterus. On examination I found in the cul-de-sac a mass very sensitive. I recommended an operation which was consented to and on May 25th made an incision. I found a hematocele of the left ovary as large as a hickory-nut or larger. I thought it best to remove the ovary complete, which we did. The right ovary was healthy. This patient made rapid recovery—all her nervousness passed off—she discarded her glasses which it was necessary for her to wear and was in perfect health. May 9th, 1905, two years after the first operation, in the meantime this patient had married, she was returned to me, giving a history of a few days previous suffering with excruciating pain in the region of the right ovary. And from the description of her case by her physician looked as if she might have ectopic, as there was more or less shock with extreme pain, etc. On re-opening the abdomen, it having been two years since the first operation, I found a hematocele of the right ovary the size of a small acorn. I excised the hematocele in the usual manner, leaving the ovary. The patient was again to all appearances in perfect health with no pains or aches—not nervous, and looking the picture of health. Shortly after this operation she became pregnant, carried the child to term, and since I am informed enjoys good health. I have noticed that these patients with hematocele of the ovary suffer greatly and are especially in an uncontrollable nervous state.

In fibroid tumors of the uterus I have made it the rule where I did a hysterectomy to leave an ovary if it was possible. Where the ovaries are prolapsed and in a healthy condition they should never be removed, but should either be stitched to the fundud of the uterus, or, as may be done in many cases, to the round ligaments.

Conclusion.—First, where the ovaries are densely adherent, necessitating more or less mutilation in freeing them from a vicious position, it is better to remove them than to follow conservative principles. Especially is this true if there has been tubal infection. Or when the ovary has undergone a natural pathologic change I have had little success in attempting to conserve a portion of it. It is certainly better to remove it if the other ovary is normal.

Second.—Simple cysts of the graafian follicles, corpus luteum, etc., are to be treated conservatively, if the remainder of the ovary which is not occupied by the cyst is apparently healthy. If on the other hand the capsule shows considerable thickening and there are evidences of other cysts forming, act radically—remove the ovary.

Third.—Hematoma of the ovary, if of large size, more or less occupying the whole ovary, extirpation; if of small size, excision.

Fourth.—Prolapsed ovaries should not be removed simply because they are prolapsed but should be stitched either to the fundus of the uterus, or, as may be done in many

cases, to the round ligament.

Fifth.—Where acute pelvic abscesses are present, the result of infection, mere evacuation of the purulent material per vagina often is all that is necessary.

Sixth.—There are quite a number of cases with the diseased ovary where after using hot douches and building the patient up the symptoms entirely disappear. But this is not the rule.

And last, but not least, it is of the utmost importance that the surgeon be well versed in a careful, well-grounded knowledge of pathologic conditions, since upon this depends his conclusions which must permanently influence anothers life. A good rule is to give nature the benefit of our ignorance or doubt.

Caesarean Section: Report of Case.*

By Dr. Seavy Highsmith, Fayetteville, N. C.

It is the belief of the profession generally that the operation for delivering a child by an incision through the abdominal wall and uterus of the mother received its name from Julius Caesar, whom it is thought was brought into the world in this way, and who was born on July 12th, more than half a century before Christ. So far as I have been able to learn, however, we have no positive proof that Caesar was thus taken from his mother's womb, and the skillful operator who performed the operation has no place in history, where his name should stand as does Hippocrates who lived more than three centuries before this time, or Galen, who was born nearly 200 years later, for this operation, if performed at all, must have been a successful one, not only to this great statesman and warrior himself, but to his mother as well, since we are reminded in studying the life of Caesar of the boy's ardent love for Aurelia, his mother. Dorland says the operation was named, as stated above, from Julius Caesar. But, according to Hirst, the name was derived from the Latin description of the operation, "*Caeso matris uteri*" (I shall cut the mother's uterus). The origin of the name, however, is not of great importance to us, but the method, while it is an ancient one, is invaluable in that in the great majority of cases in which it is indicated, it is the only method that insures life to the child and promises recovery to the mother.

Where there is no other method by which delivery can be made, as in cases of extreme pelvic contraction, or in extreme cases of hyphosis, asteomalacea, spondylolisthesis, etc., the indications for Caesarean Section should be considered absolute. In cases where delivery could be made by some other method, such as symphyseotomy, or craniotomy, the decision is sometimes difficult and the physician should choose the operation he thinks the least dangerous to his patient, and he may also consult her wishes in the matter, explaining to her, as best he can, the necessity and dangers of the operation.

The case that I have to report is that of Mrs. N. Race, white, age 23, married to a deformed husband, occupation housewife.

Family History.—Father, mother, one brother and one sister living and well developed. Also one brother, age 12, with marked Genu Verum.

Personal History.—Normal at birth. As an infant she was bottle-fed on account of poor health of her mother. At one month she was wasted to a frame with diarrhœa which lasted until she was four months old. Began to crawl at twelve months. At three years of age had whooping cough, checking her growth. Did not walk until she was five years of age. Began menstruating at the age of sixteen and was very irregular. Married at twenty-three years of age and was confined little less than a year later. She had a deformed and contracted pelvis with short undeveloped lower extremity. Above the pelvis development was normal. Patient had been healthy since childhood. She was first seen in labor by Dr. E. P. Williams, of Steadman. He diagnosed her as pregnant at term, and seeing that she was a rachitic dwarf and that to deliver her by the usual methods could not be accomplished, he called Dr. J. F. Highsmith in consultation. Having decided upon Caesarean Section, the patient was sent to the Highsmith Hospital for operation. After being in labor for twenty-four hours and riding twelve miles across the country, she was admitted to the hospital late in the afternoon on August 8th, 1906. Although she had considerable pains and her waters had ruptured soon after labor set in, the child's head had not engaged in the superior straight. So, as soon as the patient could be prepared, and on the same night that she was admitted, the operation was performed by Dr. J. F. Highsmith and myself. Having her sufficiently under the anæsthetic to be insensible to pain, but not completely relaxed, holding the uterus firmly against the abdominal wall, a free incision was made from just above the symphisis pubis to the umbilicus; this rapidly done, the uterus was brought up into the wound but not outside the abdominal cavity. This was also rapidly incised and the child was delivered and turned over to a nurse as soon as the cord had been tied. In this case we were un-

*Read before the North Carolina Medical Society at Morehead City, N. C., June, 1907.

fortunate in cutting down upon the placenta which was attached anteriorly. The hemorrhage was considerable and would have been profuse had I not constricted the blood vessels by grasping them firmly with my left hand around the lower uterine segment. Some authors advise the use of a tourniquet for this purpose, but I think the hand is much the better instrument, as you are not likely to do so much damage to the tissues. As soon as the placenta was delivered, the blood vessels immediately retracted along with the contraction of the uterus, and the hemorrhage practically ceased. The uterus was then brought together by a single layer of interrupted silk sutures, which were passed well down, but not through the uterine wall. The abdominal cavity was dried out and all blood clots removed, and the peritoneum was brought together with catgut. The abdominal wound was united by one layer of buried catgut, through and through silk-worm gut, and cutaneous sutures of silk. A firm dressing with gauze bandage was applied. The patient was put to bed and reacted well, as did also her 5½ pound baby (girl). She suffered very little afterward, milk came on the third day. After this she ran slight fever for a few days and developed a small abscess at the lower end of the wound, which was opened on the 19th day after the operation. This rapidly healed by granulation and the woman and child were both able to leave the hospital at the end of the fourth week after the operation. Dr. Williams, her physician, wrote me a few days ago, saying that about four months after she returned home a lump appeared in her abdomen about the size of a walnut. This worked its way to the surface and ruptured, discharging a small amount of sanguinous fluid and four of the sutures that were used in closing the incision into the uterus. Shortly after this two others were passed through the same opening; she was confined to her bed only a few days with this trouble and has had no further complication. She and the baby, now eleven months after the operation, are in splendid health and the operation seems to have been successful. However, there is nothing new to be presented in this case, but as Caesarean Section is the rare exception and not the rule in disposing of obstetrical cases, and since, with the exception of two cases reported by Dr. W. H. Dixon at our last meeting, there has been very little said about an operation of this kind in this State Medical Society for several years, I trust this brief report may be of interest to some members of the Society.

As to when to perform Caesarean Section in those cases where it is indicated the authorities differ—some claim that better success can be obtained by preparing your patient and doing the operation about two weeks before her full term; others hold that it is better to wait till labor has set in and uterus contractions have become regular and the waters have formed and ruptured. The latter view seems to me to be the most practical one, since it is more in accord with nature, and we would not expect so much hemorrhage as when there had been no uterine contractions. As to the best method and material for closing the incision made into the uterus, I am not prepared to say. I don't believe that silk is the proper suture as it caused us the only complication we had in the case just reported. Sterile catgut No. 3, used as interrupted sutures, passing them down to, but not through, the endometrium, and close enough to get good approximation of the wound, seems to me to be the proper method.

I hope to have these points discussed by the Society.

Spasmodic, Hysterical, Retention of Urine.*

By G. Paul LaRoque, M. D., Richmond, Va.

The following interesting case recently came under my observation and will form the basis of a few remarks on the treatment of spasmodic retention of urine.

A young woman 20 years old, unmarried, has been for the last four or five years the victim of a very pronounced type of hysteria. I reported her case in the American Journal of Medical Sciences of June, 1907, as that of abdominal hysteria with "phantom tumor." She has had appendectomy performed for appendicitis and has also been operated upon for the phantom tumor which was also, after a tedious course of treatment, finally cured.

After the operation for appendicitis she had to be catheterized for about two weeks and after the operation for phantom tumor she was also catheterized, but for not quite so long a time. She has had also hysterical amenorrhea and constipation.

Upon one occasion after a rectal examination made by the writer the patient sank into a stupor during which she was relaxed, breathed easily except for occasional spasmodic efforts and the pupils were dilated. She responded to pain caused by flexion of the great toe and was aroused without difficulty and made to walk.

June 24th, 1907, she was referred to me for the treatment of retention of urine. The following history was elicited:

April 25th, having been in good health

*Reported in abstract at the Richmond Academy of Medicine and Surgery, July 9th, 1907.

for several months, she had a slight fall which caused her no trouble in the way of bruises, but which was followed that night by vomiting, colic, hysterical stupor and retention of urine. Ever since then she has been unable(?) to void urine and has been catheterized systematically three times each day. She has also had her bladder irrigated and has remained most of the time in bed.

Physical examination notes the same hysterical type as was manifested when I saw her last year while she had the phantom tumor, but the abdominal symptoms are practically cured.

Vaginal examination was entirely negative save for a mild catheter urethritis. She has no urethral caruncle and a soft rubber catheter is introduced with ease and very little pain. Eight ounces of cloudy urine containing mucous and a small amount of pus were withdrawn. A careful examination with the cystoscope was made without difficulty and the interior of the bladder showed diffuse redness, but no signs of ulceration nor other local lesions. I then filled her bladder with sterilized solution of potassium permanganate 1 to 10,000 and announced to her that I would not withdraw it, she would have to void it. Several voluntary attempts at urination were futile. I then administered a half gallon of warm water through a short nozzle into the lower bowel and sent her to the toilet. The discharge of the water from the rectum was attended by simultaneous evacuation of the contents of the bladder. I then gave her a prescription of tincture of belladonna and sodium bromide as a local sedative to the bladder and instructed her positively never to be catheterized again, and that if subsequently she suffered with retention of urine, to give herself an enema. She returned the next day suffering again with retention and said she had given herself the enema but without effect. Vaginal examination, however, detected a mass of fecal material in the rectum. A second enema was administered and she at once voided urine. She gave herself an enema once more and by this time became tired of the trouble and now voids urine spontaneously.

The diagnosis of hysterical retention of urine implies a careful, conscientious examination of the local organs and all other organs in the body, and in order that the psychosis be assigned as a cause of retention other manifestations of hysteria must be present. The mere fact that no local lesions are found in the bladder does not by any means justify the diagnosis of hysterical retention of urine, nor must such a conclusion be reached through a process merely of exclusion. Spinal disease, brain disease, acute general exhaustion and many other serious organic conditions are attended by retention of urine, and it is unjust to the patient for this serious condition of affairs to be treated for hysteria unless it is the genuine article. Rarely, but occasionally, a young woman with nymphomaniac tendencies may refuse to void urine in order to secure the local manipulations incident to catheterization. Such a case was reported by Valentine three years ago. The present case I believe to be due to no such cause. Traumatic urethritis in this case further kept up the retention for, though the urethra was not markedly inflamed, yet in a hysterical individual even the trivial pain incident to the passage of urine over a sensitive urethra will be sufficient to cause spasmodic retention.

The treatment of spasmodic retention, whether it be hysterical or not, will be successful if a copious enema is administered. The rationale of the treatment is easy of explanation. The rectum and bladder are supplied with the same nerves and the acts of defecation and urination are performed largely by the same muscles. So that it is the universal rule, save in the presence of organic disease, that the act of defecation is attended invariably by urination, provided there is any urine in the bladder. In fact it is impossible to retain the bladder full of urine while the bowels are allowed to move, except when there is organic disease of the bladder or the urethra or their nerve and muscle mechanism. Indeed spasmodic retention of urine, even when caused by organic disease, may often be relieved by the administration of a purge or an enema. Some years ago when I was resident physician in the University of Pennsylvania Hospital in Philadelphia I noticed that cases of retention of urine incident to operation for hemorrhoids were invariably relieved when the bowels moved. I at once began the administration of purges or enemata the day after such operations and since then I have not had to catheterize a patient after this operation. It is my invariable rule now as a part of the after treatment of cases operated on for hemorrhoids to administer rectal douches for the treatment of this annoying complication of convalescence and never does catheterization have to be performed. It is also true that the spasmodic retention of urine commonly seen in cases of virulent gonorrhœa may frequently be relieved by the administration of an enema. The same is true of the spasmodic retention incident to acute prostatitis, seminal vesiculitis, and epididymitis.

So that in conclusion I am prepared to state without reservation that all cases of

hysterical retention of urine and nearly all cases of spasmodic retention, even when due to acute inflammation of the genito-urinary organs, may be at once relieved by the bowel evacuation following the administration of a copious rectal enema. I trust that other men will bear this little suggestion in mind when dealing with such cases. Aside from the not insignificant amount of trouble and inconvenience to the attending physician the relief of this distressing symptom by means other than the catheter will of times avoid the development of traumatic urethritis and its sequelæ.

506 E. Grace St.

Some of the Later Manifestations of Syphilis, with Report of Cases.†

By Wm. deB. MacNider, M. D., of the Medical Department of the University of North Carolina.

"So old, and yet so new." This adage may be quoted with much truth concerning syphilis. For there is perhaps no disease which presents as many varied and interesting manifestations, which is the subject of as many faulty diagnoses, and which turns up as frequently when we least expect it, as does this morbid condition.

Dr. Osler is credited with saying that "a man who knows syphilis knows medicine;" this is, indeed, true; for an appreciation of the importance and a knowledge of all of its many vagaries will tax the mind of the average physician and will furnish ample food for the thought of the most speculative pathologist.

The object of this paper is to present nothing new, to offer no novel methods of diagnosis, nor to suggest new therapeutic agents, but if possible by the citation of a few cases, to impress the necessity of considering this condition as a possible explanation for many inward and outward wrongs and to urge the inclusion of this disease in very many possible, and too often probable, diagnoses.

Case 1.—Mrs. W. was admitted to Rex Hospital upon a diagnosis of "cancer of the thigh." Her family history was excellent, as was that of her husband; nothing of interest came from this, except the fact that she had been married for ten years to a robust man without giving birth to children at full term. She had had one miscarriage and one abortion. Her husband was a healthy subject about middle age, drank to excess occasionally and had a moral nature which was far from being beyond question.

The past and present history of the patient relative to the "cancer" was as follows: Three years ago she noticed on her right thigh, about four inches below the right trochanter, a raised, rather hard mass about the size of a silver dollar. During the following four months this mass became soft, the skin breaking down and leaving an ulcer which discharged for several weeks a watery material with whitish granules. The edges of the opening increased in size, leaving an ulcer of a diameter of two inches which had violet colored and overhanging edges. This ulcer communicated by a sinus with a neighboring soft area, smaller than the original enlargement which discharged through the sinus into the original ulcer.

A diagnosis of probable gummata of the skin was made, and the patient was given potassium iodide gr. x four times a day in a half glass of water. The dose was rapidly increased without producing any disturbance of the stomach. A simple dusting powder, consisting of aristol, bismuth subnitrate and calomel, equal parts, was used locally. Result: The patient rapidly improved in general nutrition. The ulcer healed in a remarkably short time.

Case 2.—This case is very similar to the first one and does not necessitate a full description. Suffice it to say that the patient, a young colored woman, was admitted to St. Agnes Hospital with multiple skin ulcers of the same general character as those of the first case. Several elevated areas which had not disintegrated were found. This woman had been treated with various dusting powders and salves for two years, but unfortunately the potassium iodide had been omitted.

A similar diagnosis was made as in the preceding case and the woman was given potassium iodide in increasing doses, grs. xlv being finally taken three times a day with ease and with a rapid healing of the ulcers. The gummata which had not gone to the stage of ulcer formation disappeared without producing molecular death of the skin. Their site was usually marked by an area of induration.

Case 3.—Mr. G., age 38, married, father of four children, occupation, farmer. The patient came to Dr. H. A. Royster, of Raleigh, to be treated for slight chills of irregular occurrence which were followed by sweats. The family history of the patient was good. His parents were living and in good health. He had three sisters and two brothers, who, so far as I could learn, complained of no definite trouble, but they were not in robust health. At the age of twenty the patient was connected with a circus, in the capacity of a laborer. After two years at this occupation he began work on his farm and has continued at this steadily ever since. Mr. G. denied venerial infection of any kind. Gave a history of drinking at least a pint of whiskey a day for nearly two

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years. The present illness of the patient dated back about one year. At this time, judging from the history he gave, he likely had remittent malarial fever.

Physical Examination.—The skin and mucous membranes were pale, spleen and liver palpable, but not painful to pressure and not demonstrably nodular. The lungs were clear. Heart not enlarged; no organic murmur, but a soft, systolic functional murmur was present at the pulmonary area which was transmitted in all directions for about two inches. The patient complained of great dyspnoea on slight exertion.

The blood examination showed a secondary anæmia of moderate intensity, the hæmoglobin index being out of proportion to the reduction in the number of red cells. There was no leucocytosis. Several crescentric plaxmodia were found in stained blood smears. A diagnosis of an aestivoautumnal malarial infection was made; the patient was given quinine and iron in capsules and directed at the same time to take Fowler's Solution in ascending doses. The patient was again seen at the end of two weeks. His condition had improved decidedly. The treatment was continued.

Something over three months from this second visit Mr. G. was brought to my office by his brother. Dr. Royster being out of town, the case now fell into my hands. The patient's general appearance was so changed as the result of rapid loss of flesh and a jaundice, that at first I scarcely recognized him. His body was bent well forward and on account of severe pain of a pulling nature, just below the costal arch, he could not assume an erect position. He was suffering with marked dyspnoea.

Physical Examination.—Pulse low tension, 110; temperature, 100.5 deg. F. Skin and sclerotic very yellow and mucous membranes pale. Palpation and percussion demonstrated an enlarged spleen which had not materially increased in size since the first examination. On the other hand, the liver was decidedly larger than at the first examination. It extended three inches below the costal margin and gave on percussion an increase above of the area of absolute hepatic dullness. Just below the ninth costal cartilage a mass, which was apparently the size of an orange, was definitely mapped out. The mass was immovable, not elastic, did not fluctuate and did not take the course frequently seen in cases of distended gall bladders. On account of the decided emaciated condition of the patient, three smaller nodules were found on the exposed hepatic surface. A diagnosis of carcinoma of the liver which had likely metastacized to the lymph glands around the bile ducts appeared to be the likely pathological findings. Such being the case, the jaundice would be explained by pressure from the enlarged glands upon the bile canals in the transverse fissure of the liver. An exploratory incision was advised, but perhaps in this instance, fortunately for the patient, refused. I again inquired into his venereal history, and at this late hour he acknowledged having had, while working with a circus, a "small hard bump" on the corona Glandis. He consulted a physician who gave him a number of yellow pills and directed him to take one four times a day for several months. With this light on his case a possibility of gummata of the liver was entertained; the jaundice would then be explained by a pressure of one or more of the syphilitic deposits on the bile canals. A syphilitic cirrhosis might of course produce this same symptom. The patient was sent to bed and ordered a highly nutritious diet, consisting largely of beef, peas, eggs and milk. He was given gr. xx of potassium iodide four times a day, the dose being increased three grains each day. The drug was well tolerated and was increased until gr. xlv were being taken four times a day.

The improvement in this man's condition was rapid and remarkable. In two month's time the gummata and jaundice had disappeared and at the end of four months the liver was scarcely palpable below the costal margin. The patient gained steadily in weight and strength and eight months after the specific treatment was instituted he was a healthy, robust looking man.

The spleen remained palpable. This was likely due to a chronic splenitis of malarial origin, associated with fibrous tissue formation.

Fortunately these cases responded well to specific treatment. There are likely many in which such gratifying results could not be obtained. But I believe that, although the giving of the iodides is the essential factor in their management, two other elements play an important part. First the patient should be allowed an abundance of highly nutritious food, to raise his general nutrition to as high a point as possible so that he may be able to withstand a morbid process of such severity. In all such conditions where destructive metabolic changes predominate, impartially oxidized products, of an acid nature, which are highly toxic, are likely to accumulate and play no small part in determining the outcome of the case. For this reason water should be freely prescribed to dilute such products and aid in their elimination by the kidneys. Secondly the iodide should be given in large doses and the dose rapidly increased. Potassium iodide given in doses of gr. v or x, three

times a day, usually has little effect. It generally does not check the process and certainly does not bring about the absorption of the syphilitic deposits which is so *imperative*.

An Interesting Case.*

By Jno. W. Neal, M. D., Monroe, N. C.

On June 26th I was called to attend Mrs. W. Found her in the first stage of labor. Presentation O. L. A. Progress perfectly normal. After about an hour a girl, weighing 6½ lbs., well developed and perfectly normal in every respect, was born. The uterus did not come down at once in size as usual. Upon examination found that there was another fœtus, though evidently much smaller than the first presentation, breech, S. N. P. Pains came on in a few minutes. Membranes ruptured. Hips delivered in a few minutes. Body descended rapidly and as it passed down I rotated body to prevent the chin from catching above the symphisis pubis. There was not the least stop in the expulsion until the entire fœtus was expelled, when to my astonishment I found that it had neither head, face or arms. There were no cranial or facial bones and apparently no cervical vertebræ. No eyes, ears, nose or mouth. Just above the upper end of the sternum there was a small cleft bounded above by a small cartilagenous ring, rather angular or pointed in front. On either side and a little back of this cleft there was a small lobe almost perfectly spherical, one about three and the other about five lines in diameter, attached by small pedicals from one to two lines in diameter. The upper end of the trunk was rounded off smoothly except for the rather abundant and loosely adherent skin which was covered with hair. There were no marks pointing location of eyes or nose, and the two small lobes on the sides of the cleft the only suggestion of ears, and there were no *meati* at or near them. We presume that the cleft is possibly an abortive effort at a mouth. At the points on each side of the trunk where we should look for arms there were no appearances of any attempt at arm formation, but instead just at these points there were small dimples, one on each side.

The remainder of the body seemed normal. Sex, female. Genilatia well formed and normal. Lower limbs well formed and normal, except the feet. Each foot had just four toes. The four toes on the left foot were in line as they should be, but on the right foot the great toe was placed so as to come more in opposition to the other three like the thumb.

The fœtus was kept alive until delivery of course through the cord, but I noticed no movements of either limb or any part of body after expulsion. I did not discover any pulsation of cord and there was no effort at respiration. Weight of fœtus 2½ pounds.

There was one placenta but two amniotic membranes. The cord was small and had its origin near the center of the placenta and near the origin of the cord of the other fœtus. The cord was very tortuous, ran along on the surface of the placenta to its margin and then was continuous with and attached to the membranes for about three inches further. The twin sister is still living and growing nicely.

*Read before the North Carolina Medical Society at Morehead City, N. C., June, 1907.

The Therapeutic Uses of Turpentine.†

By Dr. John Hey Williams, 53 Haywood Stre
Asheville, N. C.

A certain great city is celebrated for the liquid that has made it famous, but our grand old State has long been famed in song and story for one of its products and its derivative congeners. A long time ago I made a statement before this body that turpentine was a stimulant. My practical friend, Dr. Fletcher, asked why I did not make a more personal use of it in view of my supposed habits. I answered by saying that there were others of the Narco-cerebral type and more suited to my personal taste, especially as there were no pathological conditions present, and that turpentine had its drawbacks.

But to speak in a more serious vein, I shall address you upon the medical and surgical uses of one of the homely remedies that deserve to be better known to the younger and coming brothers of our profession. The tendency of late years is to teach so much of laboratory methods and so much of the methods of scientific precision in diagnosis that the real aim of all this preliminary work is apt to be slighted. The real thing after all is to get the information that will direct us in our choice of the therapeutic remedy that will most certainly and speedily bring relief to the sick and suffering patient. It is much to be regretted that the ready made and highly vaunted remedies that are poured forth in a steady stream from our very "ethical" manufactories and pharmaceutical houses offers such an apparently easy solution of the matter. So much so indeed that our younger men are apt to be swamped in an embarrassment of riches. It is too easy to be content with a precise knowledge of the

†Read before the Buncombe County Medical Society, August 5th, 1907.

pathological condition in our patient and then trust to the ready to-hand preparations of our pharmacal laboratories, that are ready to take the treatment in hand after we have laboriously searched out the seat of the difficulty.

Possibly you may think that I am old-fashioned when I recommend a new and even renewed study of the old U. S. Dispensatory from Absinthum to Zingiber. The experience and combined wisdom of our fathers are gathered there and there is nothing ephemeral in its teachings. The most of the subjects of which it treats had been household remedies long before scientific investigation had passed upon their virtues and set the seal of approbation upon their usage. They were not all "made in Germany," but the whole known world has been ransacked and through the materia medica its treasures presented to us. It remains for us to cull its best and simplest.

Among the remedies that have long enjoyed the confidence of the laity, as well as the profession for even hundreds of years, is the subject of my address tonight, The Therapeutic Uses of Turpentine.

The earliest reference that I have at my command as to its usages is in this little volume that I hold in my hand, printed in 1707, just two hundred years ago. The first edition was edited by Salmon in 1676. A large amount of space is taken up in treating of various substances known as turpentine oil and spirits. The remedy known to us medicinally is the distilled spirit or volaltile oil. I doubt that many of you would know the crude turpentine as brought from the tree to the still house. It is the sap or juice of the various species of the Pinus, notably the Pinus Palustrus, the long leafed or yellow pine, common to the coast region of Virginia, North and South Carolina, Georgia and Florida. Most notably, however, in North Carolina. So much so as to mark our grand old State as famous for its tar, pitch and turpentine. The growing scarcity of the white pine along our great lakes and the Canadian border has directed the attention of the lumberman to our vast resources, and our State is fast being denuded of one of its most valuable assets. The loblolly or old field pine, which grows to a very considerable size east of the Piedmont region, gives a large yield of crude turpentine which is poor, however, in its percentage of the spirit or oil of turpentine.

The process of distillation or extraction of the volatile oil is of the ordinary kind and not of sufficient importance to take up room in a paper of limited length.

The volatile oil commonly called spirits of turpentine, has a strong and peculiar odor, very diffusible and a pungent, biting, acrid taste, lingering upon the tongue and fauces for a considerable while. It has a specific gravity of 0.86 at 72 degrees Far. It is exceedingly volatile and highly inflamable. It is very slightly soluble in water to which it imparts little more than its taste and pungency, partially soluble in alcohol and highly so in ether. It mixes readily with Essential or volatile and expressed oils. Not very readily, however, with castor oil. It is a compound of Carbon 20 and Hydrogen 16 in its purity and is practically isomeric with the radicale of camphor or camphene. It is this close relationship which gives it its high stimulant and anti-spasmodic powers. Its power of absorbing oxygen and again giving it off under certain circumstances account in part for its antiseptic virtues. Though not classed among the higher powered antiseptics, yet it has a field of its own. It has a marked power of inhibiting the growth of many of the lower organisms. According to Ruhland it stands fifth in its power of inhibiting the development of the strepto- and staphylococcus "in vitreo" and fourth in its arrest of the development of the Pyogenes Aureus. The detailed account of various observers would be too long for this paper which is intended to be an exposition of the consensus of opinion of many observers and experimenters in this field. But to pass from the work of the laboratory to that of clinical experience opens a much broader and more fertile field. In connection with its surgical uses I will call attention to the matter of tetanus. It is a well known fact that it is but little known throughout the turpentine region of the South, and is prevalent in the North and West, especially following the Fourth of July celebrations. I am firmly convinced that this marked difference is due to the universal use of turpentine as a first and generally the only application to injuries of this nature. It is a fact well known to all of us that it is an universal remedy in our country and is always at hand as a common-sense household application, possibly outranking even castor oil and paregoric. In over 28 years of surgical practice in Asheville and vicinity I have yet to see a case of tetanus or streptococcus infection where the primary wound was thoroughly flushed and dressed with turpentine. This fact affords some food for reflection. Its universal presence in the household and its freedom from danger commends its use to those who have not at their command the possibly higher powered but more dangerous preparations of bichloride of mercury, carbolic acid and like preparations better known to the profession. The general physician indeed is not in the habit of advising of the

keeping in the household of remedies of this class for reasons that are obvious. The simpler, well known, and non-toxic remedy will continue to be the favorite one till the source of supply has been fed to the greedy maw of the lumber mill.

Its use externally as a rubefacient and counter irritant is so well known as to need no commendation at my hands, and I should be badly handicapped in my treatment of the various diseases of the chest and abdomen were it not generally found in the closets and medicine cases of 99 out of every 100 families in the country. It is also in general use in the country as an application for follicular tonsilitis. A rather severe remedy but generally efficacious.

When we enter the field of internal medicine we are undecided as to what to mention first. It will be well possibly to try to group the uses of turpentine under its nosological indications.

It is a stimulant of the highest value, but npt to be classed as a narcocerebral stimulant. Long ago it was shown that in moderate doses, it produced in health, mental exhilaration, increased heat of the skin and occasionally diaphoresis, increase in fullness and frequency of the pulse. Later experiments have shown that it will increase the blood pressure from two to three m.m. In large doses it causes slight vertigo with a sense of fullness in the head sometimes amounting to a species of intoxication. It is the systemic stimulant quality that makes it so serviceable in fevers of an adynamic type and that coupled with its positive antiseptic qualities makes it of such comforting use in the invasion of the Eberth bacillus constituting typhoid fever. In an article read before this body two years ago on the Theraphy of Typhoid Fever I laid special stress upon its use in small but frequently repeated doses in cases where the tongue had become dry and glazed with a brown coat in the center with accompanying delirium and tympany. Under its continued use it is gratifying to see the tongue become moist with a return of the usual whitish fur and disappearance of the tympany and delirium and an approach to convalescence. Owing to its stimulant effect upon the mucus membranes I find it to be of service in atonic dyspepsia with a general catarrhal condition of the stomach and small intestines, with white furred, flabby, teeth indented, and tremulous tongue and food fermentation. In my hands it has far surpassed all the peptic and diastatic agents. In fact they do nothing but to relieve the stomach from its normal function during its weakness and are in no sense curative. It is of use in the ileo-colitis of children. It is useful in such cases in small doses by reason of its stimulant action upon the blood vessels, causing lessened action of the mucous glands, and by its antiseptic action upon deleterious micro-organisms that pervade the intestinal tract. It is also valuable in colliquative diarrhœas in combination with Bismuth for reasons mentioned above.

Its tonic astringent properties make it useful in hematemesis and is of excellent service in cases of malarial hematuria given in conjunction with quinine. In hemorrhage of the bowel in typhoid, not especially due to erosion of the blood vessels, but when there is passive oozing of a pupuric blood through a disorganized mucous membrane, I have found it of special service and I cannot today place my hand on a better remedy.

Graves, of Dublin, recommends it in the nervous headaches of a hysterical character in young women, possibly on account of its stimulant and anti-spasmodic power over the vaso-motor system. Acting upon this suggestion I have recently used it in doses of one dram in a case of nervous headache of a most pronounced and violent character accompanied with nausea, usually requiring morphine in half to full grain doses hypodermatically to get relief. I am pleased to say in this, my first essay, the headache was controlled within two hours and the patient, a delicate and nervous woman, dropped into a sound and refreshing sleep, awaking about three hours afterwards with no return of the headache. But this is only one case.

In small doses it is a diuretic, but not to be recommended for such purposes as there are others that are not accompanied by the untoward symptoms upon the urinary organs that are sometimes exhibited after its administration. It is useful, however, in some cases where there is a purulent process in the urinary passages, appearing to act destructively upon the lower organisms present and by diminishing the blood supply.

In the purulent cystitis of the aged I have found it of excellent service when given in connection with hyosciaums. It very speedily modifies the spasm and pain in the bladder following urination or the use of the catheter. It is in common use in gonorrhœa, but must yield the palm to our old friend Copaibae. It exerts a marked action in controlling excessive diuresis or insipid diabetes and is of use in the incontinence due to atonic debility of the bladder. It cannot be classed as an expectorant which it sometimes is, but in bronchorrhea and foetid bronchitis it is of signal service in diminishing the flow of mucous and correcting the foetor.

Rossbach states that by reason of the fact that it is largely eliminated by the respira-

tory mucous membrane it exerts a stimulant action upon the blood vessels causing contraction and resulting in absorption of the exudate and lessened action of the mucous glands. The decrease of the foetor is due to its antiseptic action in arresting the decomposition of the secretions. It may also be used in such cases by inhalation with the steam vaporizer or the nebulizer, and in combination with lupulin has great power to control the cough which is so troublesome in such cases.

As long ago as 1818 Martinet, of Paris, in one of his theses claimed great power in this remedy for the cure of sciatica which claim he repeated in a monograph in 1829, claiming that he had cured 55 out of 65 cases, using no other remedy.

I confess that I do not understand the rationale of its action, but consider it worthy of trial, even empirically, in the treatment of this intractable disease.

Martinet advises its exhibition in dram doses till its full physiological effect is produced.

Since writing above paper I have given turpentine in tablespoonful doses in egg emulsion every four hours for two days for obstinate sciatica and with very beneficial results. Very little trouble with bladder. That little controlled by Hyocyamus.

Its power of causing contraction of the blood vessels in the pulmonary tissue makes it valuable in hemorrhage of the lungs or spitting of blood, and the fact that it is always at hand militates in its favor. In such cases, however, its congener, oil of Erigerontis Canadensis, a distinct turpentine, has proven to be much more efficacious. It is in high favor as an anthelmintic and toenicide. In the latter case given in connection with the pulp of the pumpkin seed and followed by a full dose of castor oil it is almost a specific, frequently bringing away the parasite entirely.

But the list grows long enough. A slight study of this homely but valuable remedy will prompt to a more extended use and will show that the confidence of the laity in its powers is not misplaced.

In conclusion I wish to state that I have ransacked the various dispensatories and treaties upon materia medica and therapeutics and have so carefully injected my own views and observations into the subject matter of this paper that I have culled from these sources, that I shall advise care in any attacks made upon it since without careful discrimination you may confound my ideas with those of our established authorities. Since beginning this paper I have learned that a similar paper was presented to our State Medical Society. I have not seen it nor do I know of its scope. Should there be any marked similarity between our papers I would suggest that it might be because we had both quoted too liberally from the standard works on the subject.

Discussion of Dr. Williams' Paper

Opened by Dr. Smith, who believes that turpentine possesses undoubted antiseptic properties in the minor injuries. Does not give turpentine as a routine in typhoid but uses it in the later stages in sluggish cases and for tympany. Thinks it too heroic for tape-worm.

Dr. Stevens: Has seen a case of turpentine intoxication lasting two days in a patient who took ½ oz. for the relief of sciatica.

Dr. J. L. Carroll: Uses turpentine *per oram* and in 3i doses by high enema in typhoid.

Dr. Glenn: Believes that long continued use of turpentine in typhoid will cause cystitis if given in larger doses than gtt. x to gtt. xv.

Dr. Fletcher: Uses turpentine very sparingly on account of individual idiosyncrasy and finds it difficult to determine the proper doses for different patients.

Some Contact Points Between Medicine and Dentistry.*

By J. W. Foreman, D. D. S., Asheville, N. C.

Ma. President and Members of the Buncombe County Medical Society:

Permit me to apologize for the choice of essayist made by the Asheville Dental Society to appear before you this evening, and for myself to bespeak your kind indulgence. With the promise to be as brief as possible, by way of atonement, I ask your attention to a few remarks on some points where dentistry touches medicine.

These points of contact are too numerous to be covered by a paper of this nature, so we will notice only a few of the more prominent ones; and, if the promise to be brief is to be kept, these can be scarcely more than roughly outlined, leaving the details to be filled in by some of my co-laborers some time in the future should your society feel sufficient interest in any point to wish it further elucidated.

It is not so much my hope to tell you anything new, as it is to so place before you some familiar things that you may see them from the dentists' standpoint; not forgetting, in the effort to do this, that we can hold a decayed tooth or even a microbe so close to our eyes as to shut out all the rest of God's beautiful universe.

Because of the proximity of their respective territories and the close connec-

*Read before joint meeting of the Buncombe County Medical Society and the Asheville Dental Society by special invitation of the Medical Society, July 1st, 1907.

tion made between these by the mucus membrane and by the common origin and the distribution of the nerve supply, the dentist touches most intimately the specialist who finds his field of labor in the eye, ear, nose and throat. They meet on common ground in the maxillary sinus. Formerly the disturbances of this cavity were thought to be almost entirely of dental origin. Later, it came to be recognized that in many cases there was an extension of catarrhal and other inflammatory conditions from the nose into the antrum. Some twelve years ago Dr. Cryer of Philadelphia discovered that a straw passed from the frontal sinus, not only could, but, in a large per cent. of the skulls, would pass directly into the antrum instead of into the middle meatus of the nose as heretofore taught.

Following the announcement of this discovery, Fillibrown of Boston conceived the idea that this fact might account, at least in part, for the unyielding nature of the disturbances of the antrum so frequently encountered, and making investigation, with the soft parts in place, he found that in six out of eight cases examined the mucus membrane was folded so as to continue the infundibulum in a half tube to the ostium.

In some cases there was a flap—a fold of the membrane reflected upward from the lower border of the ostium in such a manner that it was impossible for the secretions of the frontal sinus to get into the nasal cavity until the antrum was full and overflowing; the drainage of the upper sinus being directly into the lower.

Because of these investigations it is now understood that many, perhaps a majority of the diseases of the antrum are due to, concomitant with or aggravated and continued by, like diseases in the adjoining cavities. This being the case the futility of attempts to cure the one without proper treatment of the others is evident. This restricts the dentist to the diseases of this cavity of uncomplicated dental origin, all others belonging properly to the specialist. But there still remains a sufficient number of instances where the disorder is of undoubted and uncamplicated dental origin, and others, where dental irritation may intensify and prolong the trouble, to make it advisable for the specialist to consult the dentist in many of his cases. All cases which fail to respond properly to treatment should arouse suspicions of dental complications.

There is a distressing condition known as mouth-breathing, in which neither the rhinologist nor the dentist can get the best results without the co-operation of the other. This condition is attended, if not produced, by enlarged tonsils, especially those of the pharynx, distorted septum and turbanates, a high narrow vault, contracting dental arch and protruding incisors.

In extreme cases the nasal passages are practically closed, the width across the mouth in the region of the bicuspids or premolars is reduced fully one half and the six anterior teeth so project that it is almost impossible to close the lips over them.

The removal of the nasal obstructions will not restore nasal breathing without the correction of the deformity of the jaw, and this deformity cannot be successfully and permanently corrected unless the obstructions are thoroughly removed from the upper air passages.

The common origin, distribution and intercommunication of nerve supply furnishes another point of contact by a train of reflex phenomena due to dental irritation, so varied, numerous, and otherwise inexplicable as to seriously handicap the oculist and aurist who fails to call to his assistance the special knowledge and skill of the dentist.

These same reflex pains masquerading in the guise of so-called neuralgia, furnish a point of contact with the physician and surgeon which is more often recognized now than formerly, fortunately for the sufferers.

It is well to remember that these reflex disturbances may appear anywhere from the top of the head to the forearm.

There is another point not so well established but of sufficient promise to merit a passing notice. An operation devised by Brophy of Chicago for closing congenital cleft palate, by which, as soon after birth as possible to operate, the parts are brought together by wire sutures passed through the body of the maxillæ.

He believes there is no arrest of development or deficiency of tissue as generally supposed in these cases, but that the points of ossification were kept separated by some force, possibly the wedging upward of the mandible, making it necessary only to bring the freshened parts in contact, to secure a whole and normal mouth and enable the infant to obtain nourishment naturally. He claims this alone would justify the operation, but in addition to this, that the deformity is corrected more satisfactorily than by any other known method. That because of the plasticity of the parts and bloodlessness of the operation the freedom from shock at that early age (under three months preferably) its claim is still further strengthened.

Further, that the bone brought in contact so early tends to make the later operation on the lip and soft palate easier and safer because of the better growth of the soft tissve and the absence of strain on the sutures;

doing away with the necessity for lateral incision to close the palate and the evil consequences of severing the tensor palati and scar tissue resulting from this.

But, perhaps, the greatest advantage is that the child acquires speech in the normal manner, thus avoiding the wrong method which becomes so strongly fixed and is so difficult to overcome when the effort to correct the deformity is deferred till later in life.

Doubtless every physician who has had many cases of grippe to treat, has observed antrum trouble attending this disease. In many such instances the most prominent symptom is that of tenderness and aching of the teeth immediately beneath the antrum indicating pericementitis. As this is the first stage of dental abscess it is sometimes hard to convince those patients who have suffered from abscess that the teeth are only secondarily involved, and that the aching will disappear when the grip begins to improve. It is, however, perfectly safe to promise them this, provided it is known, that the teeth themselves have no share in the trouble.

As the physician is seldom qualified to pass judgment on this, it furnishes another point of contact between him and the dentist. It may be well to say that the dentist who has had the care of these teeth is the one to consult, since he, knowing their previous condition, is better able to decide whether there probably is an abscess forming instead of, or in connection with, the antrum trouble. Owing to the anatomical relations of the teeth and this cavity there may be danger of inflammation of the antrum producing death by strangulation, of tooth pulp, which becoming infected may set up chronic empyema of the antrum, incurable until the offending tooth is properly treated. In these cases the tooth may be entirely free from caries or any other outward sign of disease, making it difficult to detect the offender without the special knowledge of the dentist.

I am of the opinion that very many cases of chronic empyema of the antrum originate from influenza, many of them escaping detection at the time of occurrence.

The main purpose of this paper is to call attention to the importance of clean mouths and to some of the dangers attending the other sort. It is now well understood in dentistry that clean teeth do not decay. Decay is produced by an acid generated at the point of decay. To generate this acid the germ must find undisturbed lodgement and suitable soil.

Whenever this necessary condition exists elsewhere than in fissures and pits or other defects of development it is because of lack of sufficient care of the teeth.

But caries of the teeth is not the only disease brought about by the lack of cleanliness in the mouth. Even in what would be classed as clean mouths there are found, as you all know, other germs too numerous to be even named in this paper. It is sufficient for our purpose to mention only the more troublesome ones that are most frequently found.

Besides the organism mentioned there are found in practically all mouths, those of putrefaction, some, and very often, all of the common pus germs, the pneumococcus, tubercle bacillus, and not infrequently Klebs-Loeffler bacillus.

Who can limit the possibilities for evil of any of these if left undisturbed to grow and multiply?

Who, for instance, can tell when anyone of us carrying around with us the latter organism, harmless to ourselves, shall transmit it to some susceptible child? Or how many fatal cases of pneumonia find the starting point in the mouth? The pneumococcus is reported to have been found in over fifty per cent. of what were supposed to be normal mouths. Kirk has found this germ the predominating one in pericemental abscess, a phase of Riggs disease or pyorrhœa alveolaris, and it is found very often in the ordinary chronic appical abscess as well as in the common form of Riggs' disease.

Now all these organisms are dependent upon, and exist just in proportion to, the lack of cleanliness in the mouth. The more filthy the mouth the more numerous and virulent the germs.

Would it not seem advisable for the physician to see that the mouth of his patient is kept at least as clean as the skin? Would it not be one more justifiable step for the surgeon, in his efforts to safe-guard his patient, to insist in all cases where circumstances will permit, that the mouth shall be, as near as it is possible to make it, aseptic before he enters the alimentary tract? Granting that we could know that none of these germs would do any harm outside the mouth, are there not other considerations grave enough to challenge the physician's attention? In all mouths not cared for, and in a good many others that it would be a mortal offense to even hint that they were not cared for, we find tartar, a substance consisting largely of lime and magnesium salts, cast off epithelium cells, decomposing mucus and food stuffs, and micro-organisms; in the spaces between the teeth, decomposing remains of food; cavities of decay, increasing by so much the receptacles for retention of food remains and adding thereto rotting tooth tissue; appical dental abscesses,

chronic or acute, pouring pus into the mouth, each after its kind; Riggs disease with its pockets of pus, with capacity varying from a drop or two to a teaspoonful, depending upon the size and number of these pockets. These all except the hard tartar, to be swallowed; pus and other liquid filth all through the day. Particles of food eaten at one meal and allowed to remain between the teeth and in cavities of decay, to get good and mellow, then to be displaced by, and swallowed with the next meal, along with the more plentiful supply of pus squeezed out of abscesses and pus pockets by mastication. I want to repeat and emphasize, that some or all of these conditions are found in every mouth that is not, and in very many that are, supposed to be, cared for.

Do you think this can be conducive to health?

What would be thought of a physician who in looking after a patient suffering from malnutrition, should prescribe outdoor life, sunshine and fresh air; exercise, rest and sleep, in proper proportions; tonics and alteratives (if these have not gone out of fashion) as indicated; and then when he comes to fix upon a dietary should add to each meal, so much dead epithelium cells, so much decomposing mucus, so much broken down gum tissue and decayed tooth substance, so much blood, so much pus!

If what has been said here is true do you think it overshooting the mark very greatly to assert that this very thing is done every day in every year of every physician's life? But I grieve to have to confess that the physician is not the only one to blame in this matter. The dentist is even more guilty, because he sins against knowledge or the opportunities for knowledge.

There are dentists, numbers of them, who will make a filling, place a crown or bridge or do any other of the mechanics of dentistry in the very finest manner known to the art; and then send the patient away with his mouth reeking with filth and disease, that are sure sooner or later, if life lasts, to destroy the work he strove so hard to get done and took so much pride in.

Mr. President and gentlemen, how much better it would be for those who have to trust themselves to our care if dentists knew more about medicine—and, pardon me, if physicians knew more about dentistry.

Carelessness and Ignorance of General Practitioners Responsible for Delayed Diagnosis in Many Cases of Pulmonary Tuberculosis.†

By Thos. P. Cheesborough, M. D., Asheville, N. C.

I have no excuse to make for again writing about the early diagnosis of pulmonary tuberculosis, because you have failed to profit by previous papers, and the supreme importance of early diagnosis can never be overrated. I do not hesitate to say that perhaps the most important responsibility which, as general practitioners and family physicians, you owe to your patients is to make an early diagnosis, when the tubercle bacillus is present: and coming back to my title of "Carelessness and Ignorance as causes for failure to make an early diagnosis"—why are you careless? Do you know what an enormous percentage of the world's population have and die of tuberculosis? Why do you not suspect this disease at once and give your patients a thorough examination? If you diagnose tuberculosis in its incipiency you give the patients the best possible chance to fight the disease. If you are positive he or she has not tuberculosis, think what a comfort it must be to him to know it.

There is too great a tendency to make light of your patients' complaints—and to thoroughly examine them for a possible incipient tubercular trouble is about the last thing you do. To illustrate: A patient comes to you and complains of feeling badly. You will find that he has fallen off considerably in weight, or has a slight cough, or has subnormal temperature in the morning or a slight rise in the afternoon, or even has expectorated a little blood; or who complains of repeated attacks of grippe or a tendency to catch cold. First, you say he is run down and prescribe a tonic. The patient continues to follow his occupation and continues to fall off in weight. Second, for the slight cough you prescribe some cough medicine—some opiate—which, for the time being, relieves the cough, but of course in no way arrests the progress of the disease. For the subnormal temperature in the morning you often prescribe a stimulant, and for the rise of temperature in the afternoon some antipyretic, or if you have diagnosed malaria (in fact you will diagnose anything rather than tuberculosis) you load them up with quinine, &c.

Your patients continue to run down and at last you consent to examine them, perhaps weeks, and even months, of valuable time having been lost.

And, gentlemen, when you do examine them remember, as I said above, that there is no greater responsibility that you can take upon yourselves. If the patient should be tuberculous and you fail to make a positive diagnosis, either through carelessness or ignorance, you are criminally careless or ignorant: careless, if you do not exhaust every known means to discover the truth, and if ignorant, you are criminal not to ask

† Read before Buncombe County Medical Society, July 15th, 1907.

assistance from some one who may be more competent. Do not make light of their complaint, but examine them thoroughly. Leave no stone unturned. The patient's life, hope and happiness are all in our hands, as well as the safety of the general public.

Do not try to examine a patient for an incipient pulmonary lesion with his clothes on. I tell you, gentlemen, it is no easy matter to make a proper diagnosis in the early stages of tuberculosis. Many difficulties are met with, for then the pathological changes are not well marked. It is most unfortunate that this is so, for if a correct diagnosis is made in the early stages of consumption we can almost certainly arrest the tubercular process, while in the later stages our best efforts often fail.

You have often heard it said that the pognosis in hemorrhagic cases is most favorable. I am satisfied that the only reason for that is that the bleeding has aroused the suspicions of the patient and physician, and compelled the latter to make an early diagnosis. Even the most skilled diagnosticians cannot examine a patient without removing the clothes, and yet it is no uncommon thing for me to see well advanced tuberculous patients in my office who have been under the care of prominent physicians, and yet have never had their clothes removed for a physical examination. It is your duty to make every effort and, if you are unable to make a diagnosis, turn him over to a brother practitioner, and so on. If, on physical examination, you are unable to find any pathological lesion and yet some of the symptoms I have mentioned in the beginning of the paper are present, do not hesitate to use the tuberculin test. You will also find the X-ray of great value, and of course in later stages, the microscope.

The symptoms that we mentioned before, and of which the patients complain, are some of the *probable* signs of tuberculosis.

Positive Signs.—Latham says that the grounds for making a positive diagnosis in the early stages are

1st. When the tubercle bacilli are present in the expectoration or saliva, provided no source for this is to be found in the mouth or upper air passages.

2nd. Homoptysis, even to such a small extent as a teaspoonful, is associated with suspicious physical signs or symptoms, and the careful examination of the patient reveals no evidence that the blood came from the upper air passages, or that it is dependent upon some other lesion than tuberculosis.

3rd. When we find diminished resonance and increased resistance to the finger on percussion, with the presence of *persistent* crepitations, or find rales in the lung.

Again. 1st. When the tubercle bacilli are present in the expectoration or saliva—no matter what symptoms may be present or absent, no matter what physical signs may be found. The patient may feel stronger and better than ever before, yet we must make a positive diagnosis of pulmonary consumption. The only exception to this rule is a primary tuberculosis of the mouth or of portions of the upper air passages—tonsils, larynx, pharynx, &c.

2nd. A positive diagnosis of pulmonary consumption should be made when bleeding, even to such a small extent as a thimbleful, is associated with suspicious physical signs or symptoms, and the examination reveals no evidence that the blood came from the upper air passages or depends on some other disease than tuberculosis. Some authorities go further and say that we should make a positive diagnosis of consumption in every case in which hemoptysis occurs, and no other cause for it can be found. As I said before that is why—long before the tubercle bacilli were known to be the cause of consumption—patients who had hemorrhages were those who lived longer. In those days hemorrhagic cases were all diagnosed consumption. I do not mean to say that all those who suffer from hemorrhages have tuberculosis. For myself, I am extremely doubtful, having had in the past fifteen years a number of patients in whom hemoptysis occurred at times, but in whom no other signs were present; but the responsibility of making a negative diagnosis in these cases is so great that I would much rather err on the other side.

Again it is no uncommon thing for you to leave patients, of whom you have made a positive diagnosis of tuberculosis, in absolute ignorance as to what is the trouble. You have not been candid with them, either from fear of losing them as patients, or that you might make them nervous, or for some reason you have failed to tell them of their trouble. I find very often that you have told them to come to Asheville, throw away their medicines, drink whiskey, not to consult any doctor, and that they would soon be well.

I do not exaggerate when I say that a considerable percentage of our patients have thus been deceived. Consequently, even when you have made a positive diagnosis, by not being candid with the patients, they lose much more valuable time.

Musser says in his article on "The Management of Tuberculosis" read at the Philadelphia Tuberculosis Exhibition that cancer should be our greatest motive, as to diagnosis. If a case is suspicious, but not positive, withhold your judgment and ask for

another examination. No one should be cleared of suspicion, or condemned, on one examination when the case is incompletely developed.

Secondly, as to the patient. Musser also tells him (with exercise of judgment as to his temperament) at once the nature of his illness. He goes on to say that a very sad chapterof medicine could be written of the dillydallying of doctors at the threshold of this disease either from ignorance, lack of candor and courage, or, it is suggested, from a desire to continue in attendance on the patient for fear his methods of diagnosis may be criticised.

Then, it is your duty to the public. You owe it to your fellowman to make the diagnosis if possible before the period of breaking down and of expectoration is reached; and to notify the patient that he has tuberculosis and to warn him that so long as he is absolutely careful with the sputum that he is safe, but that whenever he expectorates where it is not absolutely destroyed he is a menace, yes, a positive danger to the community. The habit of expectorating promiscuously in public is a very filthy and disgusting one, and properly educated and refined persons will not do so; but unfortunately, the vast majority are not, and it is necessary to pass laws preventing expectoration in public places where it might be harmful, thus compelling them by force to be careful. It is your duty as physicians to instruct every patient that it is dangerous; and it is your duty as parents, relatives and friends to teach them that it is a dirty habit, and so long as it is permitted to exist so long will tuberculosis continue to be the Great White Plague.

It has been estimated that every expectorating tuberculous person discharges daily from four to seven billion tubercle bacilli, and when we think of the large percentage of mankind that have tuberculosis you will agree with me that when we have thus educated the general public the progress of the disease will be checked.

Shall the Operative Treatment of Gonococcal Salpingo-Oophoritis be Conservative or Radical?—Boldt (Am. Jour. of Obst.) is of the opinion that in gonorrhœal affections of the Fallopian tubes, if operative treatment is necessary, all the features of the case must be taken into consideration. If the case is acute, and the vaginal fornix bulges from the accumulation of serous or sero-purulent exudate as the result of the existing pelveo-peritonitis, the patient should be treated on the same principle as we treat one with a pelvic abscess; a large posterior colpotomy should be made and exit given to the secretion. For this purpose the author recommends his pelvic abscess instruments. Then with the fingers introduced through the opening, the Fallopian tubes should be palpated and at the most accessible part incised, the cavity washed out as well as possible under low pressure, and a strip of gauze loosely packed into the cavity. The uterus should then be thoroughly curetted and packed with medicated gauze. Finally the cul-de-sac is also packed with iodoform gauze. The dressing should be changed as often as may be deemed necessary.

In cases of chronic suppurative salpingitis the abdomen should be opened if there is a probability of saving some part or parts of the adnexa. If a tube then on inspection should be found to be non-suppurative, an attempt should be made to save it, but if a suppurative condition is present in a tube, conservatism should be desisted from. Such Fallopian tubes, if one or both ovaries are not transformed into such abscess that conservatism with the gland is out of question, should be completely removed. The ovary, if it can be separated from the tube, should then be implanted into the gap caused by the exsection of the interstitial part of the tube, and there fastened by a thin, plain catgut suture. If the ovary cannot be separated, but a portion of it is seemingly fit for ovulation, the entire adnexa should be removed and that part of the ovary which it is desired to retain should at once be excised and transplanted into the uterine cornu. The existence of small cystic degeneration is no contra-indication to an attempt to retain the entire ovary or a part of it. The connection of the gland with the ovarian ligament should always be left undisturbed if possible. Ignipuncture in such ovaries should be used only if the cysts are larger than a hempseed. Neither is the presence of a small circumscribed abscess a contra-indication to the making of the attempt at retaining ovarian tissue so as to preserve the function of menstruation. Pregnancy has not been observed in any of the cases so treated by me, but menstruation has invariably been continued, and in nearly every instance there has been a symptomatic cure of the patient. A curetting should always precede the abdominal work.

When it is evident that ovarian structure cannot be retained, a radical operation should be done. In this class of cases it is preferable to remove the cervix also, so as to eliminate positively all specific germs in the pelvic organs, unless one can conclusively satisfy himself that the cervical mucosa is free from gonococci. In most cases the symptoms brought about by the enforced premature climacteric subside in the

course of three years or less. For sexual desire is seldom diminished; in fact, in a number of patients it is increased, though in the majority no change in this respect is produced.

The Early Diagnosis of Perforated Gastric Ulcer.—Harnett (Dublin Jour. of Med. Sci.) observes that in difficult and doubtful cases, before making a diagnosis, the following acute abdominal conditions must be considered and excluded: (1) Perforated duodenal ulcer; (2) ruptured ectopic gestation sac; (3) acute perforating appendicitis; (4) acute intestinal obstruction; (5) acute pancreatitis. 1. The diagnosis of perforated duodenal ulcer is very difficult, since this condition, up to recently, has been itself rather obscure, and a diagnosis of perforation rarely made ante mortem or previous to operation. 2. Ruptured ectopic gestation sac. This condition occasionally simulates perforation of a gastric ulcer. 3. Acute perforating appendicitis. A perforation of the appendix may occur suddenly, the first symptoms being co-incident with the onset of the perforation. In these cases the patient is suddenly seized with violent pain in the right iliac fossa, accompanied by collapse, vomiting, rigidity, first confined to right side of abdomen, but soon becoming general; distention, with paralysis of lower bowel and tympanites. In these cases, when seen early, local tenderness and resistance and muscular rigidity are the most valuable diagnostic signs, the pain in the right iliac fossa being deceptive and often simulated by other conditions. 4. Aeute intestinal obstruction. In this condition, usually due to an internal strangulation, the patient is generally in perfect health when suddenly seized with acute abdominal pain, usually referred to the umbilicus or epigastrium. There is marked collapse and pallor, and vomiting soon sets in, which later becomes bilious and finally stercoraceous. The abdomen is at first flaccid, and there is no marked tenderness on pressure, distention coming on gradually. The pain is usually paroxysmal, and the vomiting may be considered as a most valuable diagnostic sign. 5. Acute pancreatitis. This condition is rarely diagnosticated during life, although successful treatment has been recorded in a few instances. The symptoms closely simulate those of acute peritonitis—viz., intense pain and vomiting, accompanied by severe collapse, frequent pulse, marked tympanites, with some pyrexia, and a variable amount of constipation.

Cerebral Puncture.—Weintrand (Therapie der Gegenwart Lahrg.) reports his experience with cerebral puncture as recommended by Kocher and advocated by Neisser in the Congress fur innere Medizin, held in Leipzig.

The technique of the procedure is as follows:

After the skin of the skull has been shaved and disinfected it is rendered insensible in the region selected for the puncture by means of cocaine injections or ethyl chloride. A drill moved by electricity is then adjusted and bored into the bone. In this manner a small orifice is produced, through which the brain may be punctured with a needle of sufficient size, in any direction selected. The author reports four cases in which this method of cerebral puncture was employed. The old orifice in the cranium was avoided whenever the puncture had to be repeated, on account of the exquisite pain caused by this particular manœuver.

Radiotherapy in Syringomyelia.—Gyamegua (Rivista Critica di Clinica Medica, obtained considerable improvement in two cases of syringomyelia by the X-rays. The favorable outcome is attributed to the property of these rays to destroy young gliomatous and connective tissue. This results in the first place from the observation to the effect that only certain forms of syringomelia, or individual symptoms, respectively, are favorably affected by the treatment. After a prolonged description of his procedure in these cases, the author arrives at the conclusion that the employment of radiotherapy is fairly promising in gliomatous new formations and relatively recent processes. The antikathode should be at a distance of 30–35 cm. from the skin. The radiation is administered laterally through one of the vertebral arches on the two sides alternately, the non-radiated side being protected by leaden plates. The treatment should be divided into two or three series of eight to ten sessions, with intervals of several days between two treatments. In those cases where improvement takes place, the patient should not be definitely discharged, but the treatment should be repeated at the end of some time.

By vaccinating in a dark room lighted only by a red lantern Dr. Hugo Goldman, a Hungarian physician, says a typical pustule develops but there is not the slightest inflammatory reaction. The arm is covered with a red bandage to exclude the chemical light rays.

In India where the cocaine habit has reached alarming proportions even the mere possession of the drug by others than medical men has been made a punishable offense.

Charlotte Medical Journal

EDWARD C. REGISTER, M. D., Editor.

No. 36 South Tryon Street. - - - -

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THE CHARLOTTE SANATORIUM.

By way of announcement the Journal calls attention to the realization of a plan which will give Charlotte and the Piedmont Section one of the finest private hospitals in the South. The company, of which Mr. D. A. Tompkins is president and Dr. W. D. Witherbee, secretary, will have nine directors. They are: Drs. A. J. Crowell, E. R. Russell, C. M. Strong, W. O. Nisbet, W. D. Witherbee, E. C. Register, J. P. Munroe, Geo. W. Pressley, and Mr. D. A. Tompkins. A lot has been purchased on the corner of Seventh and Church streets, one of the most delightful and desirable places in the whole city. A building committee will at once take up plans with an architect and within a very short time work will commence. It is the intention of the owners to have it ready to receive patients by next April.

A large, commodious, fire-proof building of grey-pressed brick, with at least 50 private rooms for patients and perhaps 30 rooms for other purposes, will be erected. The cost will be not less than $65,000 or $75,000. Sun parlors, nurses' rooms, a Baruch System of Baths, operating rooms and an elaborate room for X-ray and electric appliances of most modern character will be provided. When completed it will be one of the most thoroughly equipped and attractive hospitals of its kind in the South.

Before adopting any definite plans a committee appointed for the purpose will visit a number of the most up-to-date hospitals in various parts of the country with a view to giving the Charlotte Sanitarium the very best features possible.

It means something for Charlotte, it means something for the whole section. Within the past ten years hospitals have come to occupy a very large place in the South and our people are beginning to realize that it is no longer necessary for them to go elsewhere for treatment. Almost every town of any size has a hospital which is frequently filled to overflowing. However in this portion of the State there is no hospital which attempts to embrace so large a scope as the promoters of this new institution intend that it shall do. Much attention has been paid to surgery in hospitals but the medical side has been neglected—at least not seeming so attractive it has not been developed as might have been done. The Charlotte Sanatorium will emphasize internal medicine and devote a large part of its work to strictly medical cases. Yet it is not intended to depreciate or neglect surgery, for ample provision will be made for all classes of surgical patients.

When ready for the patients about April 1, 1908, the Charlotte Sanatorium will be manned by a staff of well-equipped physicians. Dr. E. C. Register will have charge of the medical department. He graduated from the University of New York and has studied abroad. He is the editor of Charlotte Medical Journal and professor of practice of medicine in the North Carolina Medical College.

Dr. W. O. Nesbit who will treat the diseases of the digestion is one of the best known specialists in the State. He was educated in the North and at the South Carolina Medical College and abroad. He is professor of the diseases of the digestion in the North Carolina Medical College.

Dr. E. R. Russell, a graduate of the University of Maryland, will practice on the eye, ear, nose and throat. He took his special course in New York, was assistant to Dr. Hiram Woods, of Baltimore, for a year and studied in Vienna before coming to Charlotte. He is professor of the eye, ear, nose and throat of the North Carolina Medical College.

Dr. C. M. Strong who with Dr. Pressley will be in charge of surgery and gynecology is professor of the diseases of women in the North Carolina Medical College. He graduated in medicine from the University of Maryland and has taken special courses in New York and Philadelphia. Since coming to Charlotte he has made a substantial reputation as a surgeon, being surgeon to the Presbyterian and the Good Samaritan Hospitals. Dr. G. W. Pressley is professor of surgery in the North Carolina Medical College and his reputation as a surgeon is by no means confined to this locality. He is a graduate of Jefferson Medical College and has had a wide experience. Along with Dr. Strong he will have charge of the surgical side of the institution.

Dr. A. J. Crowell, one of the leading specialists in the State, will treat the genito-urinary and rectal diseases. He is a graduate of the University of Maryland and is professor of genito-urinary and rectal diseases in the North Carolina Medical College.

Dr. W. D. Witherbee will look after the cancer and skin disease patients. He was educated at McGill University, Montreal, Canada, was assistant to Dr. W. J. Morton, of New York City, for a time, and later studied in London and Vienna two years. He is professor of skin diseases and electro-therapeutics in the North Carolina Medical

College, being the only specialist of the kind between Richmond and Atlanta.

Dr. J. P. Munroe, president of the North Carolina Medical College, will probably have charge of nervous diseases and will be associated with Dr. Register in medicine. He has been very successful with the North Carolina Medical College and his work has accomplished much good in the State. He is a man of learning and ability.

With an appropriate building and this contingent of well-known physicians the Charlotte Sanitarium should succeed from the very beginning. The purpose of the hospital is to cure people. Just as much attention will be given to the treatment of diseases with medicine as with surgery. Neither branch will be neglected.

The hospital will be non-sectarian and non-denominational. In taking this step the professional men concerned realize that Charlotte is in the centre of a fine country and that a hospital with the most modern conveniences, equipment and methods is needed. The towns around Charlotte have hospitals of their own but it is the intention of the directors of the new institution to surpass anything in this section of the South so that a person can get as good treatment here as he would in Baltimore or New York or Philadelphia.

In connection with the hospital will be a training school for nurses. Special arrangements will be made so that patrons in or out of town can be supplied with nurses on demand. This department will be in charge of an efficient superintendent and be given special attention.

DR. JOSEPH GRAHAM.

It is with grief and sadness that the Journal records the death of Charlotte's oldest physician, an eminent man and a type seen all too rarely—the old-school doctor. Dr. Joseph Graham, after several weeks illness, passed away at 2 o'clock, a. m., Aug. 13, at the home of his son, Dr. Wm. A. Graham, in this city. For 50 years he has been one of the leading practitioners of Charlotte and his reputation was by no means confined to his home town and county. He has been an active member of his county and State medical societies, having served as president of the State society, and as a member of the State Board of Health. In this city he has been closely identified with its best interests, always striving to aid in whatever movements meant good for the town and tended toward the betterment of municipal affairs.

Dr. Graham was a man of spotless integrity, of breadth of mind and unsullied honor. As a physician he was skillful, gentle, tender and sympathetic.

Graduating from the Jefferson Medical College in 1859, he came to Charlotte the same year. Upon the outbreak of the Civil War he became second lieutenant in Brem's Battery, a company of artillery. Later he became captain of the company. Thus he laid down his professional labors to fight for his State and country and to endure all the hardships which a soldier must face during those terrible days. In 1864 he was appointed surgeon in the State service, which office he held until the surrender at Appomatox. The war over, Dr. Graham returned to Charlotte, where he has lived since in the highest enjoyment of a large and fruitful practice. Actively engaged in his work until a few weeks before his death he had long been a conspicuous figure about Charlotte. The profession of the whole city will mourn his death. As evidence of the esteem in which he was held by his brother practitioners we append the following resolutions of respect drawn up by a committee of the Mecklenburg County Medical Society:

"Inasmuch as the Omnipotent hath seen fit to take from our midst Dr. Joseph Graham, our brother and friend, and as the medical profession has, in his death, lost a most valuable and efficient member, and as the members of our profession will cherish his memory as we honored and loved the man; be it

"Resolved, 1. That we shall miss him from his accustomed place in our midst, where his suggestions were helpful and his professional bearing that of an equal among equals.

"2. That we here and now express, through the undersigned committee on resolutions, our respect and esteem for our brother. With a host of friends we mourn the loss to our community of so noble a character, a successful and well-beloved physician, a brave ex-Confederate, a sympathetic, loyal friend and a public-spirited citizen.

"3. That these resolutions be sent to the bereaved family and be published in the city papers as well as be spread on the minutes of our society."

F. O. HAWLEY,
H. M. WILDER,
C. A. MISENHEIMER.
Committee.

DR. I. W. HERRON.

Dr. I. W. Herron, one of the oldest physicians of Mecklenburg county, died at his home in Steele Creek township, Aug. 23, after a long and tedious illness. He was 75 years of age and is survived by his widow and four children. He was born in Steele Creek township on February 12, 1832, and his native county was the centre of his life

work. He secured his literary education in the common schools and Davidson College, and took his course in medicine in Charleston, S. C. In 1855, when he was but 23 years old, he began his practice of medicine and this he continued for 52 years, ministering alike to every patient with the same conscientious, faithful sense of duty, whether the patient was rich or poor.

During the war between the States Dr. Herron served in Company H, 11th North Carolina Regiment.

DR. J. O. WALKER.

Dr. J. O. Walker, of Concord, N. C., died Aug. 5th, at the home of his father, Col. J. E. Walker, at Asheboro. Dr. Walker had been called to the bedside of his father at Asheboro where he was born and reared. Before locating at Concord he practiced medicine for a number of years at Randleman. Five years ago he moved to Concord where he had been successful in establishing himself in a large practice. He leaves a wife and three children. He was twice married, his first wife being a daughter of Rev. J. R. Scroggs, by whom three children were left. Only a few months ago he was married the second time, his surviving wife being before marriage Miss Daisy Page, of Wake county.

WM. TTAVIS HOWARD, M. D., LL. D.

The death of Dr. Wm. T. Howard, of Baltimore, Md., will bring to many North Carolina doctors, who have set at his feet as students, a sincere grief. It is perhaps well known to most of us that Dr. Howard was a native of Warren county, North Carolina. He was for many years a gynæcologist of renown, being one of the original members of the American Gynæcological Society. His genial presence made itself felt at every society meeting, and he always contributed something of value to the discussions. He died at Narragansett Pier, July 31, at the advanced age of eighty-six. He was a graduate of the Jefferson Medical College, of the class of 1844. He first entered upon practice in North Carolina, and settled in Baltimore in 1866. In spite of his years, Dr. Howard kept in close touch with medical matters up to the time of his last illness, which is reported to have been of short duration.

DR. JAMES YOUNG.

At his home in Mooresville, N. C., Aug. 12, Dr. James Young, aged 38 years, died after an illness which had kept him confined for nine months.

He had practiced medicine in and around Mooresville for 15 years, enjoying an extensive and lucrative practice. Universally esteemed for his many noble traits, his death is a sad loss to his community. He is survived by his wife, who was Miss Eva Carpenter, and two children.

AN IDEAL NEW FOOD.

Results of experimentation and analysis of the new food product, *Meatox*, indicate that it is a most useful preparation destined to supercede to a great extent the use of meat extracts as a nutritive and stimulating agent for those whose condition demands a concentrated food. It is a concentrated nitrogenous food made of pure lean beef, is absolutely free from preservatives, yet it keeps indefinitely. Meat extracts contain only the stimulant parts of the beef; Meatox in addition contains all the nutritive elements—fat and proteids. Meatox actually contains a higher percentage of proteid (73 to 75) than good lean beef (16 to 20). Each pound represents the nutritive substances of from four to five pounds of lean, boneless beef, or about ten pounds of ordinary butchers meat. To the physician the presence of this high proteid content will recommend the article as an important part of the dietary in certain cases.

From the laboratory of Curtis and Tompkins, analytical chemists, of San Francisco, the following report was sent:

	Water	6.85%
(a)	Proteids Insoluble in hot water	68.59 "
(a)	Proteoses, Gelatinoids, etc.	1.69 "
(a)	Meat Bases, etc	8.18 "
	Fat	12.20 "
	Carbohydrates (sugar and starch)	None
	Crude Fiber (trace)	0.30 "
	Ash (mineral matter, free from Sodium Chlorid)	2.14 "
	Sodium Chlorid (salt)	0.05 "
		100.00%

They likewise testify to the absence of preservatives—as Borates, Salicylates, Fluorides, Benzoates and Sulphites. The total proteid (nitrogenous matter) amounted to 78.46 per cent.

Jno. C. Tresh of the Public Health Laboratories, in London, and Dr. Stanislans, of the Medico-Chirurgical College, Phila., substantiate this report in their work on the article under discussion.

Meatox can be eaten mixed with cereals or vegetables, milk, broth, etc. Almost every form of food can be prepared with it.

Soldiers or sailors in service can be fed with three ounces of it per diem in connection with cereals, cooked green vegetables, etc. In all cases the best results will be obtained if it is taken in its original condition after which the patient should drink some

water or milk to wash it down.

A few trials will convince discriminating physicians that this product will be tolerated by most dyspectic patients, when taken in its original granulated form, ½ ounce every five hours (5 teaspoonfuls represent 1 ounce by weight). No less can be said in its favor when employed in the treatment of diabetic patients. Here the patient needs a large amount of proteid matter to repair the waste of economy and without overtaxing the patient's stomach. Three ounces per diem will supply him with all the nourishing quality of meat. This fact of its being borne and assimilated by delicate stomachs is of the utmost importance.

It can be eaten on buttered bread or toast presenting a veritable *multum in parvo* of nourishment.

SOUTHERN MEDICAL ASSOCIATION.

The Journal has watched with a great deal of friendly interest the progress in the organization of the Southern Medical Association. It is a most fortunate stroke for the medical profession of the South and we take it as an omen of good that it aims to promote medical science and to avoid politics. Certainly it gives opportunities to medical men of the South which they could never hope to find in the great national association. For a great many reasons most doctors cannot possibly attend a meeting of the A. M. A. except at very long intervals, and not as least among these reasons would we enumerate the vast distances he must oftentimes travel, with the necessary expense and considerable time lost from his work.

However, we do not deem it in any way expedient that we should attempt to show why the Southern Medical Association should exist. There has been so great a field for just such an organization that there is nothing but good to be said of it. It deserves, and we believe it has, the good will of the profession generally in the South. The only "kick" we have to make is that North Carolina doctors have not been made eligible for membership. Is there any good and sufficient reason why the doctors of a southern State should not be included in the Southern Medical Association? Naturally there was necessary a nucleus of organization, but it is scarcely possible to exclude the profession of States other than the six or seven which originally comprised the association. These are merely some suggestions which evince the favor with which the new organization is looked upon by the profession.

The Constitution now provides that members of the Component State Medical Societies (Tenn., Ala., Ga., Fla., La., and Miss., with Kentucky added) and commissioned officers of the Medical Departments of the United States Army, and Navy and Marine Hospital Service are eligible for membership in the association. The dues are only $2.00 per year.

On scientific work there are three sections.

1. The Section on Surgery, including General Surgery, Gynecology and Obstetrics, Dr. F. W. Parham, New Orleans, La., chairman.

2. The Section on Practice of Medicine, including Materia Medica, Therapeutics, Pathology, Bacteriology and Hygiene, Dr. Thomas D. Coleman, Augusta, Ga., chairman.

3. The Section on Ophthalmology, Otology, Rhinology and Laryngology, Dr. L. G. Woodson, Birmingham, Ala., chairman.

The association is well manned by some of the very best men to be found in the land. They are as follows:

Officers: Henry Hagar Martin, M. D., President, Savannah, Ga.; Mack Rogers, M. D., Vice-President, Birmingham, Ala.; J. B. Cowan, M. D., Vice-President, Tullahoma, Tenn.; J. R. Tackett, M. D., Vice-President, Meridian, Miss.; Raymond Wallace, M. D., Secretary, Chattanooga, Tenn.; Y. L. Abernathy, M. D., Treasurer, Hill City, Tenn.

Councilors: George C. Savage, M. D., Nashville, Tenn.; D. F. Talley, M. D., Birmingham, Ala.; Michael Hoke, M. D., Atlanta, Ga.; John Mac Diarmid, M. D., De Land, Fla.; W. W. Crawford, M. D., Hattiesburg, Miss.; E. D. Martin, M. D., New Orleans, La.

The next meeting will take place on September 24-26, 1907, at Birmingham, Alabama. The enthusiastic secretary, Dr. Raymond Wallace, of Chattanooga, Tenn., is striving with all his versatility to make this a most successful meeting. Certainly it will be. There is every reason why it should. The Journal can offer nothing but praise and approbation.

EXAMINATION FEES FOR INSURANCE.

A matter of the utmost importance to the medical profession is the question of fees for Life Insurance Examination. The violation by some of the resolutions passed at Greensboro, in 1905, at the annual meeting of the State Medical Society, abrogates all efforts on the part of the profession to stand up for its rights.

If medical men would but realize that a great fundamental principle is being violated when we permit a corporation to dictate to us what we shall charge for our services there is little doubt but that they would be ready to take a firmer stand in this matter. The worst of it is that some have not stood

up for his clearly defined right. While others have declined to make examinations at a lower rate than $5.00, there has not been wanting the fellow who would snatch at the opportunity to do the work for less. The doctors themselves, those who will not realize that the only way to gain the victory is to charge unfalteringly (and to charge $5.00) and all together, are alone to be blamed. All that is necessary is to stand up for and insist upon a recognition of our rights.

The resolutions adopted by the State Medical Society are as follows:

Resolved, That the House of Delegates of the Medical Society of the State of North Carolina do hereby adopt and recommend to the General Meeting of the State Society the adoption of the following preambles and resolutions:

WHEREAS, The fee of $5.00 for each examination of an applicant for life insurance (including a chemical analysis of urine, or even when no urinalysis is required) whatever amount of insurance is applied for, and an additional fee of $5.00 for each microscopic examination, is in the opinion of the society both just and reasonable; and

WHEREAS, A number of old line life insurance companies have recently sent to the members of this Society in many parts of the State, a schedule of fees for life insurance examinations much below those stated above, and have declared that after a certain specified date they will not pay to their examiners fees larger than those prescribed by themselves; therefore,

Resolved, That the Medical Society of the State of North Carolina denies the right of life insurance companies to fix the fees which medical men shall charge for their services, and does hereby urgently recommend that each of its component County Medical Societies shall maintain the schedule of fees indicated in the first preamble above, for the reasons stated therein, and shall reserve to itself the right to fix fees for all services rendered by its members to any and all persons or corporations.

Resolved, That we do not deem it ethical to accept any compensation from any life insurance solicitors for life insurance examinations supplementary to the fees charged the company.

Resolved, That in the opinion of this Society it is incompatible with the principles of medical ethics adopted by it for members of one County Medical Society to go into other counties and examine applicants for insurance at a lower rate than the fees fixed for said services by the Medical Society of the county or counties to which said members shall go.

Resolved, That the Secretary of the State Medical Society be instructed to send to the Secretary of each County Medical Society a copy of these preambles and resolutions, and shall urgently suggest prompt action on the part of each County Society.

(Signed) THOMAS S. MCMULLAN,
A. W. KNOX,
JAMES A. BURROUGHS,
Special Committee on Insurance Examinations.

It is hoped that insurance companies doing business in North Carolina are beginning to realize the fact that they cannot get as good service for small fees as for larger. When a doctor can make the same fee in his regular practice and a great deal more easily he cannot be expected to spend an hour, or perhaps longer, in making a tediously thorough examination of an applicant for a life insurance policy with the expectation of collecting a paltry fee of $3.00 or less. Certainly no one could blame him if he makes a hurried and somewhat superficial examination. Sooner or later the fact will become evident that the companies are not getting as good work as they should.

That some of them are beginning to view the problem in its proper light is shown by the announcement made elsewhere in this number that one of the largest companies in New York has returned to the old fee. This may mean a great deal to the profession and to the companies likewise. We hope it is but the beginning of the end to this controversy in regard to the question of fees.

SAN FRANCISCO AND PLAGUE.

Five cases of bubonic plague with four deaths have been reported to the San Francisco Department of Health during one week in August. Since that time until this writing there have appeared in the newspapers no further reports. The patients, with one exception, were inhabitants of the poorer quarter of the city in the neighborhood of Chinatown. A steamer from which an infected sailor was taken was kept in quarantine. "Luckily," says the Medical Record, "Schmitz, the mayor who tried to suppress the report of the former outbreak, is now in jail, so measures can be taken to prevent the spread of the disease."

Either this is true and no further spread of the disease has occurred or the present administration is suppressing reports. This is but another evidence of the prevalence of this dreadful disease. It threatens to invade all countries of the globe.

STOVAINE.

It is interesting to note the derivation of the word "stovaine," the term which has been applied to a newly discovered drug

having properties very similar to those of cocaine. It is said to exert a physiological action very similar to cocaine but that it is devoid of many of the bad effects of the latter. The curious name, "Stovaine" is due to the discoverer of the drug, M. Fourneau, who being exceedingly anxious to perpetuate his own name in connection with his discovery, but being unable to compound a word resembling "cocaine" out of "Fourneau" simply translated it into its English equivalent "stove" and added the necessary termination "-ine."

OLD FRIENDS WITH NEW FACES.

Recent changes made in the St. Louis Medical Review brings the July issue to us in new apparel. We regret that Dr. Millican, who has presided over the Review in so able a manner, as his readers are ready enough to concede, will no longer actually conduct that Journal but leaves it to enter a "wider field" of duty. We are left in the dark as to whether medical journalism is to lose so talented and capable a man as Dr. Millican has shown himself.

Beginning with July the St. Louis Medical Review is now appearing monthly instead of weekly with enlarged space for reading matter. Dr. Louis M. Warfield has assumed the duties of editor and the recent issues under his regime guarantee the excellence of his work. The Journal welcomes this new member of the family of monthly journals. We have the utmost confidence in its success.

INSURANCE EXAMINATION FEE.

An announcement comes to this office which cannot but indicate that the insurance companies are finding it decidedly against their best interests to have reduced the fees for medical examiners to the low rates which have existed during the past few years. The Mutual Life Insurance Company, of New York, has announced to its examiners that the fee will be five dollars in the future. We append an extract from a letter to their Medical Referee from the Medical Director of the Company:

"I am sure the medical profession in parts of the country have greatly misunderstood our attitude in this matter. As you know, we adopted a graded fee schedule reluctantly, feeling that it was necessitated by the strong demand for economy which applied especially to cost in obtaining new business. From my former letters, you know that the Legislature of New York put a very sharp limitation on the amount which could be spent in obtaining new business and made it a criminal offense to exceed this. All the items which entered into this first year's expense were materially reduced, among them being the Medical Examiner's fee. The law did not wholly go into effect until January 1, 1907. At the end of six month's trial, we found that our economies had been greater than necessary and there was in consequence a small unexpended surplus.

"We appreciated the Medical Examiner's work and his value to the Company, and as soon as it was demonstrated that this surplus existed, the first thought on the part of the Company was to restore the old fee to the Medical Examiner."

Dr. J. F. Highsmith, of Fayetteville, has announced his withdrawal, on Sept. 1st, from general practice. He now devotes his whole time and attention to surgery and gynecology, and to office and consultation work.

Dr. Highsmith has been quite successful in his work. Only recently we have had accounts of the considerable additions made to his hospital, thus giving him facilities which abundantly warrant his action announced above. We are pleased to note the remarkable growth of this institution which has come to occupy a most important place in its section of North Carolina.

We congratulate the doctor and bespeak for him the success he deserves.

ATOXYL.

A very interesting article entitled "Recent Developments in Therapeutical Applications of Arsenic," by Dr. J. Snowman, appeared in The Lancet on April 27, 1907. Arsenic must always command the interest of the clinician because its toxicology is so reminiscent of pathological processes. Arsenic may be regarded as a drug, the value of which chiefly depends upon the circumstance that it produces structural alterations in the tissues. The group of drugs formerly known as alteratives possess the property of modifying the nutritive processes in the body. It is obvious that this effect involves definite chemical changes in cell constitution, and advanced changes of this character inevitably modify structure. The great value of alteratives in therapeutics is that they often change pathological processes brought about by disease into physiological processes. Their failure frequently arises from the circumstance that they introduce into the body their own toxic pathological processes. This is exceedingly well exemplified by arsenic, which is able to produce a mimicry of several diseases. The art of employing arsenic in medicine consists of gaining control of its pharmacological action and making it subservient to therapeutic aims. Perhaps one of the best established facts inthe therapeutics of arsenic is

that it modifies the nutrition of the skin. The other departments of disease which are favorably affected by arsenic are represented by such diverse conditions as chorea, malaria, and the anæmias. The rationale of its action is indefinite.

The impetus to the chemical modification of arsenic was mainly given by the desire to obtain a preparation whose therapeutical value should not be prejudiced by its toxicity. Accordingly, in 1897 Danlos introduced cacodylic acid which is chemically di-methyl arsenic acid. Its sodium salt is most often used. The arsenic exists in this compound in very close combination and its liberation in the body is a very slow and gradual process. This consideration is regarded as the explanation of its low toxicity. The cacodylates certainly gained wide popularity as safe and efficient substitutes for arsenic. Their reputation in chronic pulmonary tuberculosis was remarkable, and they sustained the credit of arsenic for improving nutrition when metabolism was deranged in wasting diseases.

At the present moment, however, interest in the therapeutical developments of arsenic is concentrated in the combination known as atoxyl. Chemically this substance is metra-arsenic anilid. It was first used in 1900 in Lassar's skin clinic, after its properties had been derermined by experiments on rabbits. It contains metallic arsenic in the proportion of 37.69 per cent., or, in other words, half the amount of arsenic present is arsenious acid. It possesses one-fortieth part of the toxicity of arsenic or one-twentieth of that of arsenious acid. It is an odorless white powder with slightly saline taste and its solubility in warm water is one in five. Its solution is stable and does not give the characteristic tests for arsenic. Atoxyl has now had a somewhat prolonged trial and the clinical results justify the conclusions that (1) it affords the means of increasing the amount of arsenic given without the risk of poisoning; (2) it possesses in full measure all the therapeutical properties of arsenic; and (3) that its value is proportionate to the increase of arsenic which its administration permits. The favorite method of the exhibition of this drug is by hypodermic injection. The dose should start with one-twenty-fifth of a gram. When it has been determined to give a course of arsenic over any prolonged period the most convenient plan is to inject one-fifth of a gram of atoxyl twice a week. Intravenous and also intramuscular injections are employed, but subcutaneous injections are unirritating and quite efficient.

The earliest cases treated by atoxyl were dermatological. Naturally atoxyl has been applied to other general morbid conditions wherein arsenic finds a field for employment. The improvement in nutrition which follows the use of the cacodylates in pulmonary tuberculosis obtains also in the case of atoxyl. Cases of anaemia and chlorosis which appeared to resist iron treatment did well and finally became quite cured under a course of atoxyl. Mendel has used the drug in neurasthenia, hysteria, facial paralysis, sciatica, and spasmodic asthma, and he regarded it as a perfect substitute for arsenic. It is eminently applicable in chorea, and is one of the most successful remedies for Graves's disease. Atoxyl also finds an excellent application in the neurotic disturbances associated with the climacteric. The very latest investigations into the action of this drug are concerned with the therapeutics of trypanosomiasis. It has been demonstrated by Laveran and Mesnil that arsenic kills the trypanosomes circulating in the blood. It can, however, only be relied upon to cure the disease in an animal which otherwise possesses great resisting power, because this lethal action of arsenic on the parasites ceases with the excretion of the drug or on its combination with the fixed tissue elements. It follows, therefore, that the trypanosomes which have not been destroyed continue to exist and multiply and circulate in the blood stream. Atoxyl possesses the same action as arsenic, but can be pushed to a much greater extent than the latter. The reports of Robert Koch and others on the treatment of sleeping sickness by atoxyl are distinctly encouraging. So far, autoorities do not allow themselves to put their trust in atoxyl to effect a cure, but its therapeutical activity in that direction is undoubted.

Review of Southern Medical Literature

The Southern Practitioner, July, 1907.

Local Anesthesia.—Dr. P. DeWitt believes that fifty per cent. of all surgery can be done with local anesthesia. Hernia, varicocele, suprapubic cystotomy, hydrocele, castration, vasectomy, non-suppurating bubo hemorrhoids—internal and external removal of lipomata, sebaceous cysts and other superficial growths, thyroidectomy, neurectasy of the great sciatic, amputations below the elbow and below the hip, suturing fractured patella and clavicle and many other operations belong to this field—abdominal sections are, as a rule, contraindicated not because of any difficulty in opening the abdomen but because the exact intra-abdominal condition is never known till it is reached, and adhesions cannot be handled locally. Internal appendicitis cases

with very few adhesions can be done on thin-walled patients with little discomfort, but the majority of people won't stand for their abdomens being opened while awake. Perforating typhoid ulcer can often be handled with ease. The abdominal muscles can be incised without pain, but cutting the parietal peritoneum feels like a pin scratch with a slight sickening sensation. Where there is contra-indication to general anesthesia from cardiac or other cause we should not hesitate to proceed with cocaine. One of the greatest boons is amputating in shock from accident. To amputate in shock is conceded to be bad surgery. This is because the shock of the operation is too great when added to that already produced by the accident. Shock from amputating comes: first from pulmonary anesthetic; and second as was shown by Crile, from cutting nerve trunks which have a nude open circuit with the spinal cord. In amputating locally these two shock-producers are done away with because the nerve trunks are blocked with cocaine before cutting.

Suturing a fractured patella is very easy.

Inguinal herniotomy is perhaps more often done with cocaine than any other operation. The author sums up as follows:

Fifty per cent. of all surgery can be done with local anesthesia. Cocaine in weak solution is the best drug. Morphia must be given before hand. Idiosyncrases need not be considered. The surgeon must have absolute confidence in himself and cocaine, knowledge of technique and anatomy.

The patient's comfort is to be considered at every point. The assistants must be careful and watchful and let the surgeon do the operating. Having complied with these necessities there is no reason why local anesthesia should not be more universally used and many unfortunates who carry their ills to the grave rather than take an anesthetic be relieved of their suffering and pass their remaining years a comfort for themselves, a happiness to others, and a living monument to the profession whose first duty is the relief of suffering and betterment of mankind.

The American Practitioner and News, July, 1907.

Pruritus of the Anal Region.—Dr. B. Asiman says that cleanliness of the anal region is a necessity. Rest and sleep in extreme cases must often be artificially produced for a time, care being taken that the patient does not contract a drug habit. Lotions and applications of various kinds have been recommended in great numbers, many of which are complete failures in the majority of cases. Of the lotions one of the best is the lactate of lead, highly recommended by Miles, of London. It can be easily prepared by mixing one drachm of liquor plumbi subacetatis with 7 drachms of fresh milk. It forms a thick creamy compound with which a piece of gauze or cotton can be saturated and placed in contact with the itching surface. In the author's experience the most reliable agents to release the compressed nerve filaments and to restore the diseased skin to the normal condition are monochloracetic acid and compound tincture of benzoin used in the following way: After thoroughly cleansing and drying the affected area paint it over very lightly with a saturated solution of monochloracetic acid, being careful not to allow the acid to touch any place except the part to be treated. Apply gauze saturated with olive oil and bandage. Inspect the part the following day and if there are any points that have not been acted upon by the acid retouch them. After four or five days the superficial layers of the epidermis that have been destroyed by the action of the acid begin to peel off leaving a raw but healthy surface if the acid has gone deeply enough. Keep clean, dress every day, and as soon as the desquamation is complete apply compound tincture of benzoin liberally every second or third day. This can be done conveniently by means of a tooth-pick, around the end of which a small pledget of cotton has been wrapped and dipped into the benzoin. Partial relief from the itching dates from the first application of the acid and it should be complete by the time the skin is entirely healed; if it is not we are to understand that the acid has not acted deeply enough and a second application should be made and followed by treatment with the benzoin as before.

Atlanta Journal-Record of Medicine, July, 1907.

Home Treatment of Tuberculosis.—Dr. J. E. Summerfield says that when such a patient is first seen and the diagnosis made it is best to be frank with him and tell him he has tuberculosis, that it is a curable disease and that the cure will depend more upon him than upon the attention of the doctor, and if he is not willing to obey instructions that treatment would be useless. As a rule there is little difficulty experienced in getting the co-operation of the patient. Examine the home carefully, see if the house is sufficiently high above the ground and dry, that the bed-room is properly ventilated and the bed so placed that the patient does not sleep in a draft; otherwise place a screen around the bed to protect the patient. If possible have the patient sleep in a room alone. Knopf, of New York, has

suggested an apparatus which is a modification of a tent, an arrangement whereby patients can sleep indoors but still breathe outside air. The bed is placed alongside of a window in the same manner as an awning is fastened on the outside and it can be raised or lowered by means of a pulley and rope. It is made of canvass and has a transparent window of celluloid enabling the patient to see what is going on in the room and permitting those in the room to observe the patient. When lowered it covers the upper half of the patient who protects his head and shoulders by means of a woolen hood, leaving only the face exposed. In the day time the apparatus can be pulled up and is out of the way. For patients confined to the bed the apparatus can be used by day as well as by night. It has not been patented and can be made cheaply. It is described and cuts shown in the Journal of the American Medical Association for Jan. 19th, 1907. When patients are first seen a careful record of the conditions found is kept and examinations are made weekly. The author finds that a short talk of encouragement given each patient at the examinations is of benefit. Microscopic examinations of the sputum are made and are only of value when positive. The author has had cases with typical symptoms where repeated examinations of the sputum were negative.

Virginia Medical Semi-Monthly, July 12th, 1907.

A Successful Method of Treating Gall Stones without Resort to Surgery.—Dr. C. S. Webb gives the following treatment: Take one dram of chloroform, two ounces of olive oil and two ounces of mucilage acacia. Mix, shake well, and give two teaspoonfuls every four hours. These doses may be varied somewhat as to quantity and interval if the conditions seem to require it. After taking this mixture for about forty-eight hours let the patient fast for ten or twelve hours and then give the following at one dose: One drachm of Spts. Eth. Co. with eight ounces of olive oil. Mix and shake well and take all at one dose. The patient is then directed to lie on the right side with hips slightly elevated for one hour; then on the left side with hips elevated about twelve inches, the spinal column being kept as straight as possible so as to form the hyotheuense of a triangle of which the perpendicular is twelve inches and the base a smooth mattrass. This position is kept, if possible, for one hour and a half. After this the patient may sit up or walk around the room if so disposed. After three hours a full dose of castor oil is given. The discharges should all be saved, well diluted and strained through a wire seive. Any careful observer who has once seen and examined gall stones will have no difficulty in identifying them against the "fatty concretions" and foreign substances sometimes mistaken for them.

The chloroform in the first prescription relaxes the involuntary muscles and also of the biliary ducts. The common bile duct is constructed in size during its passage between the coats of the intestine. That is between the muscular and mucus coats. This part of the duct therefore is also enabled to dilate or expand because of the relaxation of the muscular coat of the duodenum. The compound spts. of ether given with the final dose of olive oil helps this dilatation, At this stage of treatment the position is everything. When lying on the right side, hips elevated four inches, the oil glides out of the stomach into the duodenum and backs up as in a reservoir. When the position is changed to the left side the oil finds its way into the common duct and perhaps into the gall bladder, and so the tubes are lubricated, the calculi are oiled up, and when the patient assumes the upright position the oil flows out by force of gravity and brings the calculi along with it.

The Mobile Medical and Surgical Journal, July, 1907.

Philosophy of Serum Therapy.—Dr. N. E. Sellers says that toxin and its modified forms, toxoids and toxones, all have affinity for the autotoxin, and the first and last must be neutralized before the patient can be considered safe. The toxins and toxoids have greater affinity for the autotoxin than does the toxone, so in the administration of the autotoxin the quantity sufficient to neutralize the toxin, toxoid and toxone must be given or you will have the late manifestations of the disease, such as paralysis.

The severity of the case and the length of time also should be considered in the administration of the anti-toxin. It is very reasonable to suppose that a severe case would require a greater quantity of the anti-toxin than a mild one; but the length of time also plays an important part, for instance a case of long duration with clinical signs of a case at its severest point would require a greater quantity of the anti-toxin because in this case you would have sufficient toxin in the system to produce the clinical phenomena, and in addition you would have more toxoid and toxone, the latter having less affinity for the antitoxin and must be neutralized to avoid the later manifestations of paralysis. The normal blood can be rendered immune to this disease by much smaller amounts of the anti-toxin serum, the immunizing dose which

produces a passive immunity, a result which can be explained as follows: The system is filled with receptoes so that when the bacteria begin to produce toxin it is neutralized sufficiently fast to prevent any clinical signs of the disease; while in the meantime the system is protecting itself by further production of receptoes of antitoxin and by phagocytes, and thus the disease is prevented. When the disease has been contracted, known of course by the clinical picture, curative doses are given with the sole purpose of combining with the toxin toxoid and toxone and thus neutralizing them just as free hydrogen and oxygen combine to form water. The receptor receives the haptophone, this is rendered inert so the toxophone or poisonous part of the molecule is thus rendered non-toxic since it has lost, so to speak, its haptophone and is in itself devoid of affinity for the cells.

Maryland Medical Journal, August, 1907.

Logical Basis of Neurasthenia.—Dr. A. K. Bond says that all nerve response is dual; that with every nerve impulse is associated its limiting impulse; that when nerve force is called into activity there is evoked likewise its control, to restrain it within its proper bounds of area and intensity and duration. Heretofore we have recognized limitations, but have regarded them for the most part as due to passive resistance of adjacent tissues or to the natural waning of the force evoked. The authors proposition is that with the awakening of any nerve force there is a simultaneous awakening of a definite companion force designed to control the former.

Treatment.—Both the nerve activity and the nerve control must be restored to normal vigor. Three things are needed—removal of the cause of exhaustion, rest to the exhausted nerves and roboration of them. To discover the cause—the organ or function really at fault, the sexual teasing, the concealed emotion or worry—demands medical discernment of high power. The hurried doctor, the unsympathetic doctor, the materialist, should not attempt to treat such cases. If he does the patient is liable to drift into chronic invalidism or insanity, or to acquire a drug habit. Thought exhaustion cannot always be met by body rest which is often needed as a first step in treatment. For rest of the thought centers the attention of the patient must be diverted to unwonted themes, but to those which are simple and easy to comprehend and which lead into open air and sunshine. Anodynes strong enough to prevent deep or lengthy reflection and to secure restful sleep are often of value, but the patient should not know what he is taking. The control forces may be renewed by lessening the number of nerve outgoings requiring control and by giving regulation of the patients activities into the charge of a well-trained, well-balanced attendant. Certain drugs which incline to indolence are of value here as aids. Roborants are to be directed in general to the building of the whole body. They are very numerous, including many agencies besides drugs. Nourishment to the fullest capacity of digestion, careful exercise as soon as possible, sunlight and fresh air tone the whole system. Change of scene, new companionship, new enthusiasms, simpler religious faith, quickened hope invigorate the higher centers. The higher controls may be strengthened too by association with individuals of sturdy character and by instruction concerning reasonableness of self-control and the wrong of the cultivation of invalidism. The doctor's example in these things is often the chief incentive to convalescence. The patient who has not sufficient self-control to keep off of pet worries and unwholesome thoughts must be forced to diverting companionship and physical labors (more or less mild) during every moment of the day. Especially must morning reveries before rising be prevented. Bed life in hospital wards even may favor this form of neurasthenia.

Virginia Medical Semi-Monthly, July, 1907.

Principles of Surgery, Lecture XXXII, Wounds (continued), Arrow Wounds, Brush Burns, Dissecting Wounds, Stings of Insects, Bites of Serpents.—By Dr. Stewart McGuire, Richmond, Va.

Pure Drugs.—Dr. H. W. Wiley says that it may be of interest to give some idea of the magnitude of the drug business in this country. It is estimated that there are at least 50,000 different kinds of drug products, proprietary and otherwise, at present placed on the market in the United States. Of these only about 1500 are described in the United States Pharmacopoeia and National Formulary. A large number of products other than those recognized by the U. S. Pharmacopoeia and National Formulary are sold under standards fixed upon the labels themselves. It is difficult to tell just what percentage of the drugs is affected by the adulteration provision of the law. If we should say that about 20 per cent. is so affected it would probably not be an extravagant expression. That would leave, say 40,000 articles of drugs to which the law does not apply in any respect except in regard to misbranding. The misbranding clause of the act, as will be seen, is very comprehensive and has already been instrumental in securing long needed reforms. It

has been the practice in the past to place drugs on the market of an uncertain and in many cases unknown composition; sometimes too they have been of a questionable composition. We need only to look over the day to see how extravagant the language has often been in representing the merits of these drugs. Apparently there has been little restraint placed upon the imagination in the use of qualifying adjectives portraying the merits of these substances. Not only have these drugs been directly to the laity, as we all know, but even in advertising to the profession, either medical or pharmaceutical, the most misleading and extravagant representations have been made. A very effective method in advertising to the laity is to represent the substance as a "cure"; even surgical cases which could not be reached by medicaments of this kind have been represented as entirely cured by a few doses of the drug in question. The author mentions a few of these so-called cures which have been prominently brought to his attention since the passage of the Food and Drugs Act. Cancer cure, consumption cure, diabetes cure, etc. Examinations showed that these so-called "cures" were made up of a single simple drug or a mixture of two or more drugs without any specific action whatsoever on the diseases in question.

The Texas Medical News, May, 1907.

Sub-arachnoid Anaesthesia with Tropa Cocaine.

The Southern Clinic, July, 1907.

Maternal Impressions.—By Dr. J. S. Cobb, Clayton, Del.

Gaillard's Southern Medicine, July, 1907.

The Influence of the Internal Secretions in Connection with the Use of Thyroid Gland Extract in the Treatment of Cretinism.—Dr. Louis Fischer quotes the conclusions of Sajous as follows: 1. The thyroid gland supplies the blood with a secretion which has for its object to sustain the functional activity of the anterior pituitary body. 2. The anterior pituitary body is directly connected with the adrenals through the spinal cord, the thoracic ganglia, the splanchnic nerves and the semilunar ganglia of the sympathetic nervous system. 3. The thyroid gland, the anterior pituitary body and the adrenals are functionally interdependent and constitute a system through which cardiac action, respiration, and general cellular oxidation are maintained. 4. The thyroid gland sustains the normal functional activity of the anterior pituitary body while the latter in turn maintains the normal activity of the adrenals. 5. The functional activity of the anterior pituitary body is increased when the blood contains an excess of thyroid secretion or sufficiently active toxins; bacterial toxins, poisons, physiological, toxalbumins, etc., to comprise the general cellular integrity of the organism. 6. The functional activity of the adrenals is increased proportionately with that of the anterior pituitary body when the latter's activity is increased from any cause. 7. The functional activity of the anterior and posterior pituitary body is passively decreased when the blood contains an insufficient proportion of thyroid secretion or is inadequately oxygenated or when from any cause its intrinsic metabolism is reduced or impaired through deficiency of any of its molecular constituents. 8. The functional activity of the anterior pituitary body is actively decreased when the blood contains a sufficiently active toxic of any kind, bacterial toxin, poison, etc., to induce excessive metabolism of its intrinsic cellular elements and thus cause exhaustion or molecular metamorphosis of the latter. 9. The functional activity of the adrenals is decreased proportionately with that of the anterior pituitary body whether the reduced activity of the latter is due to active or passive pathogenic factors. Hypertrophy of the suprarenal tissues has been found after the injection of small quantities of diphtheria toxin in guinea pigs. Thus it appears that the adrenals show excessive activity when toxins are injected into the system. This view is supported by the investigations of Sajous. Symptoms of poisoning are really manifestations of overactivity or of insufficiency of the adrenals and that the functions of these organs may be stimulated, inhibited, or arrested in two ways:

1. By direct action of the toxic agent upon their cellular elements, and most liable to occur in acute infections and chronic diseases and intoxications.

2. By an indirect action upon the vascular supply of the organs through a primary action upon the centers of the nervous elements that control the adrenalin secretion, and most liable to occur in acute intoxications by toxins, venous, vegetable and mineral poisons.

Texas Medical Journal, July, 1907.

The Treatment of Extra-Uterine Pregnancy.—Dr. A. P. Heineck says the vaginal route is to be employed only in cases of pelvic abscess; that is only in cases in which an ectopic fetal sac or a pelvic hematocele or a pelvic hematoma have undergone suppuration. Still while the vaginal route is becoming deservedly more and more unpopular it should not be entirely abandoned.

Many surgeons employ both routes in cases in which either the one or the other proves insufficient. The author prefers the abdominal route for the following reasons:

1. It enables the operator to attend to coexisting pathological conditions at the same time that he removes the gestation sac.

2. It enables one to secure a more complete and more careful hemostasis, the operative field being under much better control.

3. Hemorrhage can be arrested with greater rapidity; celerity is an important factor in operations involving the opening of the abdominal cavity.

4. The extent of damage can be better judged; a more direct examination can be made and hence a more accurate diagnosis.

5. A more conservative ablation of organs can be made. There never should be any needless sacrifice of important organs, i. e. tubes and ovaries.

5. It is possible to get in contact with the exact conditions and also to remove more completely the fetal sac and its contents.

7. The sense of sight as well as that of touch can be utilized.

8. If a diagnostic mistake has been made you have ready access to the conditions which simulate ectopic pregnancy.

9. This is an abdominal condition and to meet it a laparotomy is more liable to be successful than a vaginal section. At times the ovum is inaccessible by the vaginal route. It may ascend into the abdominal cavity.

If a pyosalpinx, hydrosalpinx, or coexisting tubal pregnancy of opposite tube, a benign or malignant neoplasm be found in the opposite tube remove it of course. If the pathological conditions existing in the non-pregnant oviduct or ovary require their removal the presence of ectopic pregnancy does not contra-indicate it.

Southern Medicine and Surgery, July, 1907.

The Significance of Abdominal Pain.—Dr. L. E. Burch believes that the three most common acute lesions of the abdomen that are met with at the bedside are appendicitis, gall bladder disease and ulcer of the stomach and duodenum, and in each of these the pain begins usually in the epigastrium. In appendicitis the pain begins in the epigastrium, and in the course of a few hours localized tenderness is found at or around McBurney's point. The author, however, has seen a case in which there was no tenderness over the appendiceal region until the third attack, and during this attack the appendix ruptured. While the age of the patient is to be considered less in this disease than in any other two, for the reason that it occurs at all ages, yet according to Fowler over fifty per cent. of cases occur before the twenty-fifth year, and much more common in the male than in the female. In disease of the gall bladder the pain begins in the epigastrium and usually radiates to the right costal arch and right scapular region, occasionally to the left. A tender spot is often found on the right side one inch from the spine between the eleventh dorsal and the first lumbar. It is a pain that comes irregular as to time, is not relieved by food and is not often traced to it and is more common in the female after the thirty-fifth year. In ulcer (duodenal and gastric) the pain is usually limited to the area over these organs. It is often reflected to the left subscapular region, rarely to the right; it is burning and gnawing in character, and runs in periods of several days to several months. It comes from two to four hours after meals and is temporarily relieved by food, water, irrigation or vomiting. In gastric ulcer, however, food, etc., often has the opposite effect. There are many other important signs and symptoms that assist in making a correct diagnosis but these, however, do not come within the scope of this paper.

In conclusion the author says that abdominal pain is the most important of all symptoms in visceral disease; that the location of the pain does not invariably correspond to the diseased organ; that the production of abdominal pain as yet is not fully understood and that a spreading pain should be looked on as a bad symptom. All abdominal pains should be looked upon as a sign of impending danger, and that no morphine, food or purgatives be given until a correct diagnosis is made.

New Orleans Medical and Surgical Journal, July, 1907.

Pruritus.—Dr. J. F. Buguois says the source of irritation is scratching and one that is extremely difficult to combat. Until it is overcome no relief can be expected, as when the skin is rubbed or scratched there is produced a local hyperaemia and dermatitis which adds to the local distress. It is not sufficient to tell the patient not to scratch; the surface must be protected by proper dressings and the itching relieved by the use of antipruritics. Of the latter carbolic acid easily takes first place. It has been termed the morphine of the skin. In lotions it may be used in strength of 1 to 5 per cent. In ointments it may be increased. Bronson uses it in 25 per cent. strengths, stating that it is much more slowly absorbed than in aqueous solutions. The antipruritic effect of corbolic acid is enhanced by the addition of alcohol in aqueous solutions, besides the

latter renders it less toxic. Salicylic acid, hydrocyonic acid, menthol, camphor, thymol, creosote, chloral and chloroform and a long list of other drugs in strength varying from 1 to 5 per cent. in lotions, oils, and ointments may be used with effect. Morphia, atropia, and cocain give temporary relief in lotions or ointments. Pastes and ointments are irritating to most pruritic skins, but in a few cases more acceptable than lotions. Among other remedies occasionally of service are ichthyol, resorcin, and bichloride of mercury. Bronson speaks very highly of hydrogen dioxid. The tarry preparations are as a rule not well borne, though in a few instances prove extremely valuable. Liquid preparations are preferable.

Book Notices.

Surgery. Its Principles and Practice. Vol. II. In five volumes. By 66 eminent surgeons. Edited by W. W. Keen, M.D., LL.D., Hon. F. R. C. S., England and Edinburg, Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Phila. Volume II. Octavo of 920 pages, with 572 text-illustrations and 9 colored plates. Philadelphia and London: W. B. Saunders Company, 1907. Per volume: Cloth, $7.00 net; Half Morocco, $8.00 net.

The second volume of Keen's Surgery amply justifies the expectations which have been aroused in the medical world since the work was announced by the publishers. This entirely new surgery, edited by Dr. W. W. Keen, covers the entire field of surgery in so thorough and complete a manner and with such a wealth of detail that no surgeon or practitioner can well be without it. A glance at the list of authors of the various articles shows that they are men whose names are specially associated with the subjects upon which they have written—renowned specialists with international reputations. The work does not express the thought of any one country alone; it is world-wide in character, representing the best surgical practice of today. Every chapter in the book represents a complete and original monograph by an authority of recognized eminence. This work promises to be the most complete treatise on surgery ever issued and in order to make it practical and useful the publishers are producing it in five handy volumes; and, although the volumes contain an unusual amount of matter—900 to 1000 pages each—they are only two inches in thickness. A special feature are the numerous illustrations, prepared by highly competent artists. This facilitates a ready understanding of the text. The cuts are original and new, with many colored plates. The publishers are doing their part to make the work attractive.

Volume II includes articles on Diseases of the Bones and Joints, Fractures, Dislocations, Orthopedics, Surgery of the Muscles, Lymphatic System, Skin, Nerves and Spine.

Manual of Diseases of the Eye. By Charles H. May. Fifth Edition Revised. With 362 original illustrations, with 22 plates, with 63 colored plates. 1907. Price, $2.00 net.

The favor with which this Manual on Diseases of the Eye has been received is sufficient guarantee of its excellence. Already it has reached its fifth edition since its appearance in 1900. As a concise, practical, systematic manual this book has no equal. It is sufficiently comprehensive for the practitioner to use for ready reference and as a student's text-book it is just full enough—yet without excessive detail, extensive discussions, and lengthy accounts of theories and practices.

The new volume has not been increased in size, yet it has been thoroughly revised. No physician's library can be complete without it.

Treatment of the Diseases of Children. By Charles Gilmore Kerley, M. D., Professor of Diseases of Children, New York Polyclinic Medical School and Hospital, etc. Octavo volume of 597 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, $5.00 net; Half Morocco, $6.50 net.

There has long existed the need of some modern work from which the general practitioner could obtain quickly the desired information on any disease of childhood—a book that would express the latest therapeutic thought, stated clearly, concisely, and definitely. Dr. Kerley has supplied just such a work—a practical book, planned and written for the practitioner's daily use. Modern methods of management and treatment are given in great detail, and the means and methods prescribed have the distinct advantage of having been drawn from actual clinical experience. In every case the therapeutic directions given are definite and complete, and when age has any bearing upon the course of treatment, the treatment for different ages is clearly indicated. The first chapters of the work are devoted to such general subjects as clothing for the infant, bathing, management, sickroom, etc. Then follow chapters on the newborn and its diseases, the feeding and growth of the baby, the care of the mother's breast, artificial feeding, milk modification and

sterilization, diet for older children. There is a large chapter devoted to therapeutic measures other than drugs, and an excellent illustrated chapter on Gymnastic Therapeutics. A chapter on Drugs and Drug Dosage will be found extremely helpful to the practitioner. In every way it is just the work for the physician engaged in general practice.

A Manual of Diseases of the Nose, Throat, and Ear. By E. Baldwin Gleason, M.D., Clinical Professor of Otology at the Medico-Chirurgical College, Philadelphia. 12mo of 556 pages, profusely illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Flexible leather, $2.50 net.

This new volume will furnish to both practitioners and students a manual to which quick reference can be made on the essential facts of Rhinology, Laryngology and Otology. Anatomy, Pathology and Physiology of the upper respiratory tract have not been neglected—a feature which makes the work all the more valuable since a knowledge of these is essential to the efficacous treatment of disease. The details of inspection, examination, and diagnosis are very fully presented and illustrated. Methods of treatment and the use of instruments are presented in the simplest, plainest manner, and only those operations are advised and described which seem best. The collection of formulæ at the end of the book is a most valuable feature. Illustrations are profuse and the book is handsomely bound in flexible leather.

Gynecology and Abdominal Surgery. Volume I. In two large octavos. Edited by Howard A. Kelly, M. D., Professor of Gynecologic Surgery at Johns Hopkins University; and Charles P. Noble, M.D., Clinical Professor of Gynecology at the Woman's Medical College, Philadelphia. Large octavo volume of 851 pages, with 405 original illustrations by Mr. Hermann Becker and Mr. Max Brodel. Philadelphia and London: W. B. Saunders Company, 1907. Per volume: Cloth, $8.00 net; Half Morocco, $9.50 net.

Kelly and Noble's Gynecology and Abdominal Surgery is unique, in that it combines in one work a complete presentation of both medical and surgical gynecology, together with a full treatise on abdominal surgery. This gives this work a two-fold value; for not only the gynecologist and general practitioner will find it an exhaustive and working treatise, but the general surgeon also has here presented to him the latest technic of the various abdominal operations, fully described and illustrated. In order to make the work of more practical value, the field of obstetrics has also been invaded, and those operations included which are performed by the gynecologist and the abdominal surgeon.

In that part of the work treating of abdominal surgery proper (as distinct from gynecology), besides a full description of the usual abdominal operations, there are elaborate chapters on operations during pregnancy, operations before puberty, and conservative operations upon the appendages—subjects usually treated of only in monographs. Over one hundred pages are devoted entirely to medical gynecology, prepared especially for the general practitioner and treated from his point of view instead of from that of the gynecologist. Heretofore the practitioner was compelled to search through an entire book in order to obtain the information desired; but in this one chapter has been gathered all the information so much needed by the practitioner in his daily work. There is a separate chapter devoted exclusively to bacteriology and pathology, and dealing fully with this scientific basis of gynecology. In no other work can this information, prepared by specialists, be found as separate chapters, convenient for study and quick reference. Special attention has been devoted to modern surgical technic, describing fully and clearly those details and procedures that are in most books neglected entirely or only casually mentioned. The text is written in a terse, clear-cut, definite style—a style only to be acquired from actual clinical experience covering many years in diverse fields. The operations described are graphically portrayed by some 650 original illustrations, drawn by the expert anatomic artist of the Johns Hopkins Hospital. The names of the editors seem quite a sufficient guarantee that the work is authoritative and complete. The work is in two volumes of 900 pages each.

American Edition of Nothnagle's Practice —Intestines and Peritoneum—New (2d) Edition, Revised—Diseases of the Intestines and Peritoneum. By Dr. Herrman Nothnagle, of Vienna. Edited, with additions, by H. D. Rolleston, M. D., F. R. C. P., Physician to St. George's Hospital, London, England. *Second Edition.* Octavo of 1059 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, $5.00 net; Half Morocco, $6.00 net.

Nothnagle's Practice needs no comment. It has set the standard of excellence to which others may aspire. The monographs edited by the now lamented Prof. Nothnagle have not been surpassed in any lan-

guage. Under the able editorship of Dr. Stengel, the work has but recently been presented to the English speaking world, in most attractive form. With the assistance of various specialists in this and other English speaking countries he has succeeded in producing a work which is even superior to the original German to which numerous additions have been made in order to make it thoroughly up to date. The fact that already, three years after the appearance of the first edition, a new edition is necessary speaks well for the manner of its acceptance by American & English physicians.

The volume on Diseases of the Intestines and Peritoneum has all the excellent features of the previous edition, yet, there have been made a few alterations and editions by the editor, Dr. Rolleston. An authoritative system which forms the court of last resort in matters medical.

Transactions of the American Pediatric Society, Eighteenth Session. Atlantic City, N. J., May 30—June 1, '96. Edited by Dr. Linnaeus Edford La Fetra. E. B. Treat & Co., New York, Publishers.

The volume contains many most interesting and instructive papers by men whose name are known throughout the length and breadth of the land.

The American Esperanto Book. A compendium of the international language, Esperanto. Compiled and Edited by Arthur Baker, A. E. A., Editor of "Amerika Esperantisto" Chicago. Chas. H. Kerr & Co., Chicago, 1907.

For over two thousand years philosophers have speculated as to the ultimate possibility of bringing all mankind to speak a common language. Hundreds of attempts to invent and secure the adoption of such a language met with failure. They succeeded in proving but one thing—the need of a language which might enable the citizen of one country to be understood by those of another, without sacrificing a great portion of his life to mastering foreign languages.

At last, as has been the case in so many other fields of invention and research, the right idea occurred to the right man. The man was Lazaro Ludovicko Zamenhof, a Polish doctor of medicine, and the culmination of his idea, or group of ideas, is Esperanto. The language is primarily designed for Europeans, being built up with material selected from the Latin, French, Spanish, German, Russian and English. A well-educated person can read Esperanto fluently after a day's study; and speak and write it equally well in a few weeks; while it is possible for persons who do not know the language to communicate by means of it, using a small "key."

Revolution and Counter-Revolution, or Germany in 1848. By Carl Marx. Edited by Eleanor Marx Aveling. Chas. H. Kerr & Co., Chicago, 1907.

A series of letters written by the famous German Socialist for the New York Tribune on conditions which existed in Germany and France in the few years preceeding 1851 and '52. Somewhat unintelligible as to its purpose, it is nevertheless distinctly revolutionary and socialistic in its tone. To a certain class of readers it is doubtless a book worth reading.

Increased Demand for Capital.

The fall in prices is due, primarily, to the absorption of capital the world over. If it were local to the United States, as some of the critics of the Administration would have us believe, it might be attributed to local causes. In fact, however, it affects Great Britain, where the price of consols has fallen as low as 80¼, or lower than at any time since 1848; it affects Berlin, where serious banking troubles have been feared; and even affects Paris, where the Bank of France carries a stock of gold which makes the Paris market almost impregnable.

There is a simple philosophy to the monetary situation in these great markets. It is a philosophy which is simple, at least to the student of political economy, but unfortunately not all our statesmen nor even all our financial writers are trained economists. The explanation of high rates for money all over the world is that the capital sought for the creation of new enterprises, like railway extensions, new rolling mills, new buildings, and the opening up of new countries, does not equal the demand for it. Every civilized community today produces annually not only all that is needed for its immediate consumptive wants, but a surplus over for making additions to the existing equipment of production. It is not money which is lacking, in the sense of gold coin and notes. It is a sufficient supply of raw material, labor, and machinery to create all these new works. Men who wish to enter upon such creations seek to borrow the capital of others through the form of banking credits. They find that those credits are exhausted or reduced. They then offer a higher bid for surplus capital by offering new securities cheap. In order to buy these new securities, holders of old securities are willing to sacrifice them in some cases at reduced prices in order to take the new. In other words, the mass of securities, both old and new, competing for a market, is in excess of the combined demand for securities at former prices. Hence the fall in

their current quotations.—From "The Progress of the World," in the *American Review of Reviews* for September.

A Treatise on Fractures and Dislocations. By Lewis A. Stimson, B. A., M. D., Professor of Surgery in Cornell University Medical College, New York. New (5th) edition, thoroughly revised. Octavo, 847 pages, with 352 engravings and 52 plates. Cloth, $5.00, net; leather, $6.00, net; half morocco, $6.50, net. Lea Brothers & Co., Philadelphia and New York, 1907.

The universality of these injuries, and their demand for prompt treatment on the spot, require all general practitioners as well as surgeons to be conversant with the best manipulations and management. Their variety is too great for full consideration in works on general surgery, and the result of partial knowledge eventuating in a shortened leg or a stiff joint is apt to be a law suit damaging to reputation and pocket. It behooves every medical man to be ready.

In his volume, which has now become classical and the authority accepted both by the profession and the courts, Dr. Stimson has covered every known form of these lesions, many of which were first described in his pages. His literary style is notable for clearness so that his readers need not err. His work stands alone in literature as including a full consideration of Dislocations as well as Fractures, two cognate subjects advantageously handled in close connection. This single volume accordingly affords complete and authoritative information on a large and important surgical specialty. Its recognized position is shown by the demand for another new edition, the fifth, which the author has again revised to the latest date.

Five Hundred Surgical Suggestions. Practical Brevities in Surgical Diagnosis and Treatment. By Walter M. Brickner, B. S., M. D., Chief of Surgical Department, Mount Sinai Hospital Dispensary, New York; Editor-in-Chief, American Journal of Surgery, and Eli Moschcowitz, A. B., M. D., Assistant Physician, Mount Sinai Hospital Dispensary, New York; Associate Editor, American Journal of Surgery. Second Series. Duodecimo; 125 pages. New York; Surgery Publishing Co., 92 William St., 1907. Price, $1.00.

It is not surprising that the first edition of "Surgical Suggestions" was quickly exhausted.

In this second series all the surgical suggestions of the first issue have been incorporated, and as many more, making a total of five hundred terse, useful "therapeutic hints and diagnostic wrinkles." Several new topics have been thus introduced and the old ones much expanded. An index is provided. The paragraphs, as before, have all been suggested by the authors' own observations. Many of them are bits of wisdom that are not to be found in the textbooks. We do not believe that even an experienced surgeon will fail to find among these five hundred suggestions some hints that will repay him many fold for the leisure hour spent in reading this small manual. And to those who have not enjoyed many years of active surgical work, five hundred practical, epigrammatic surgical dicta will surely prove immensely helpful. The internist is concerned in the diagnosis of surgical and borderline affections, and to him, also, we commend the many diagnostic hints between the covers of this little book.

As before, the publication has been prepared in a manner worthy of its unique contents. It is a pocket manual de luxe!—printed in attractive Cheltenham type, on antique India tint paper, with marginal headings and subheads in contrasting ink, and with an artistic binding of heavy cloth, gold-lettered.

We warmly commend this book. Those wearied by searching for information through ponderous text-books and lengthy articles will find actual refreshment in Surgical Suggestions, every one of the 500 paragraphs of which is a separate and useful bit of practical knowledge.

Abstracts of the Leading articles of the month.

Favorable Influence of X-Rays in Chronic Bronchial Affections.

Schilling (Munchener medizinische Wochenschrift) had occasion to examine a patient with a severe bronchial asthma and used the x-ray to determine the condition of the pulmonary organs. The patient found that his asthmatic condition was very favorably influenced by the x-ray examination. The improvement was so marked as to induce the author to apply the x-rays in a systematic manner in a large number of cases of bronchial asthma and chronic bronchitis. He tabulates the results as determined by the amount of sputum raised before and after treatment. One case a drop from 150 c.c. to 80 c.c. in three days after the x-ray exposure. Another patient had been coughing and expectorating for months. The day before treatment the sputum amounted to 170 c.c., the day following 140 c.c., then 110, then 50, and decreased to 40 c.c. by the sixteenth day, and expec-

toration had ceased entirely by the end of the fifth week. In every instance the amount of sputum dropped nearly one-half after the exposure and progressively declined thereafter. Every patient was favorably influenced, and the improvement or the complete cessation of the expectoration and the asthma persisted for months. He suggests as explanation of the unmistakable and prompt benefit derived that possibly the proliferating cells of the microscopic glands in the bronchi react to the rays similarly to the effect observed in the x-ray treatment of hypertrophied prostate, lymphoma, and goiter, etc. The extreme permeability of the lungs for the x-rays aid in the process. He used a 30 cm. inductor. The patients were seated and the exposures were made from two to four directions, and in places to get to the lungs with the least muscular resistance. Protection was used for parts not to be treated and the exposures lasted from ten to twenty minutes, the distance of tube being 15 cm. The total of the exposure was kept within the range of the maximal dose and only a single sitting was given. Schilling, however, in spite of the unmistakable relief from excessive bronchial secretions and from the tormenting asthma, reserves his opinion in regard to the therapeutic value of x-ray in the treatment of bronchial affections, until he can speak from a larger experience.

The Effect of Drugs on the Uterus.

Cushny (British Medical Journal) has investigated the effects of different medicines on the uterus of living animals. The animals, rabbits and cats, were anesthetized, and the abdomen opened while the animal was submerged in normal saline. The movements of the uterus were definitely recorded by means of levers. The drugs were then introduced into the jugular vein. Different animals reacted unequally, and there was a difference in the gravid and the non-gravid uterus. Nicotine produced contractions of the non-gravid uterus in the rabbit, while in the cat atony was produced. In the gravid uterus of both animals marked contractions occurred. Stimulation of the hypogastric nerve caused atony in virgin cats, while in the multiparous and gravid cats contractions of the uterus were produced. The author explains this by saying that this nerve contains inhibitory and acceleratory fibers. During pregnancy, the latter predominate, i.e., the uterus becomes so sensitive that the influence of the inhibitory fibers is neutralized. Similar effects were observed from adrenalin. Atropin had no apparent effect on the normal uterus, on the contrary, it counteracted the effect of pilocarpin, which in both the virgin and the gravid uterus produced violent contraction. Quinine had the same effect as pilocarpin, but its effect was not influenced by atropine. Aloin given in fresh form had no effect. Ergotin produced strong contractions, lasting several minutes, after which the uterus remained sensitive for some time. The contractions were short and continuous in some of the experiments, in which cases small doses of the preparation caused paralysis of the hypogastric nerve. With other preparations of ergot, large doses were required. The author supposes that there are two substances in ergotin, one of which produces contraction by direct stimulation of the uterine muscles, the other causing paralysis of the intermuscular nerve endings.

The Contagion of Cancer.

Butlin (British Medical Journal) tells us that the accumulation of knowledge of the last few years enables us to formulate, much more definitely than we could before, the conditions under which cancer is likely or unlikely to be accidentally communicated from one human being to another. All cases of reputed contagion of cancer in which the disease is not of the same variety must be unhesitatingly rejected. Cases must not be accepted where there is no evidence that the affected parts of the two individuals were from time to time in contact. It is extremely improbable that contagion would take place from a covered cancer, such, for instance, as a cancer buried in the breast, or that the disease could be implanted in a part the covering of which has not been broken. These exclusions largely limit the number of possible cases of contagion, and the limitation is still greater when it is taken into account that sepsis of the tumor or of the broken part which comes in contact with it is an almost absolute obstacle to the success of accidental implantation. For it is notorious that cancers which are exposed for the most part rapidly become septic and ulcerate and suppurate. The best evidence of the contagiousness of cancer is furnished by the occasional examples of successful implantation in different parts of the body of the same individual. Such cases have long been known under the name of autoinoculation. Probably the best example is where a squamous celled carcinoma on one labium of the vulva of a female affects the opposite one, whether it be the labium majus or minus. It affects the opposite side of the vulva by direct contiguity as surely as a condyloma. Time only is necessary and a certain amount of moisture to make it invariably the rule. In conclusion, the writer gives details of fifteen cases of autoinoculation of cancer, undoubt-

ed or apparent. For some years past surgeons have been more cautious than they used to be in dealing with cancerous growths, and many cases have been recorded in which there was reason to believe that recurrence was due to implantation during the implantation rather than to imperfect removal of the disease. Cancers should not be cut into unless for diagnosis, and the wound should be tightly closed before the actual operation is commenced. The instruments which were used for the purpose of diagnosis must not be used again until they have been boiled. Exposed or ulcerated cancers should not be pressed against or dragged across raw surfaces made in the course of the operation. And care should be taken that breaking down cancers should not be opened during operation. If they are opened by mischance means should be taken to cleanse the surface of the wound and to destroy the exuded contents of the cancer cavity.

Movable Kidney.

Bishop (Lancet) states that true floating kidney—that variety which possesses a mesonephron and is entirely surrounded by peritonæum—is a thing of great rarity. In searching through the literature of the subject he has only found three undoubted specimens. The majority of cases fall into the category of "mobile" or "wandering" kidney; they are not surrounded by peritonæum, and their excursions take place entirely behind the parietal peritonæum in the loosened subperitoneal connective tissue. On only four points are all writers on the subject agreed. These are: 1. That such a condition does actually exist. 2. That this condition exists more frequently in women. 3. That it is most frequently seen on the right side. 4. That it is frequently associated with neurasthenia. There is marked disagreement as to the frequency of the condition, and as to its importance. Whatever view is taken of the causation of wandering kidney, it is evident that the factors producing the displacement act unequally upon the two equally important segments of this part of the urinary apparatus, the kidney itself and the peduncle composed of its ureter and the vessels passing to it from the aorta and vena cava. Whether loss of supporting fat, alterations in the incidence of intraperitoneal pressure, or undue traction upon the lower end of the ligamentum suspensorium renis, all will act with much greater and more immediate force upon the kidney itself, and it will only be after these factors have been in action for some time and have begun to be reinforced by the added weight of this organ, that any alteration will be perceptible in the attachment of the ureter to the spinal column or in the length of the vessels. Two stages in the descent of a "wandering" kidney are therefore predicable from the very conditions present, and the history of reported cases proves not only that such stages do occur, but that they are easily recognizable, the symptoms present in each being markedly different. In the first stage the kidney itself tends to sag downwards, the lower pole becoming recognizable by the examiner's hand on a lower and more median plane than normal; the vascular peduncle being, however, of a normal length, the actual position of the organ will be that of the resultant of the two forces acting upon it—loss of support, aided by any other force pulling downwards, and the inward pull of the vascular and ureteral peduncle; it will consequently rotate in the line of a curve, the centre of which will be the most fixed point of its attached vessels; this is the stage described by Morris as a distinct variety, the "cinder shifting" variety. The symptoms of this stage are such as might be expected from the mechanical condition; the bend produced at the junction of the renal pelvis with the ureter, produced by the rotation of the kidney, will interpose a distinct obstacle to the due evacuation of urine from the renal pelvis and the renal intrapelvic distention so caused will result in aching and tenderness in the renal region of the affected side. If the bend be an acute one and somewhat suddenly made, Dietl's crises will be present; these depend not only on the ureteral obstruction, but also, and perhaps mainly, upon the kinking or twisting of the renal veins which necessarily accompanies it; these crises are characterized by violent attacks of colic, attended by nausea and vomiting, possibly abdominal distention and tenderness, sometimes by a rise of temperature and collapse. Digestive disturbances, nausea, dyspepsia, vomiting, and jaundice have been frequently observed. Almost all the symptoms of the first stage are of an acute type. In the second stage, owing to the persistent downward traction, the attachment of the ureter to the spinal column becomes looser, is elongated, and permits more range of movement. At the same time the blood vessels elongate and become less firmly attached. Kinking of the ureter is much less likely to occur, and if it does occur is much more easily overcome. Pain is no longer sudden and acute; there is rather a feeling of weight and discomfort in one loin with a sensation of dragging, stiffness in the back, some cramp in the abdomen, and backache. All these symptoms are increased by exercise. Digestive disturbances are common in this stage. The presence of calculous deposit

in the renal pelvis as a complication greatly intensifies the pain. The author describes a new operation for the fixation of floating kidney, in which the lower segment of the renal capsule is stripped off and attached to the abdominal wall. Sutures are also passed between the renal pelvis and the site of attachment of the renal peduncle.

Successful Treatment of Tetanus.

Galliard (La Tribune medicale) reports the following unusual case: A woman of intemperate habits had an attack of morbilliform erythema distributed over the body, which was succeeded by free desquamation of very large scales. There were multiple ulcers upon the lower limbs, which had existed previous to the eruption. Two weeks after admission (November 4th) into the hospital, she had some trismus, but without fever or severe pain. She was ordered six grammes of chloral hydrate. Five days later there was retraction of the head, with contractions of muscles of the nucha, the shoulders, and the limbs. At this time, antitetanic serum was given in doses of 20 c.c., and the daily quantity of chloral was increased to 10 grammes. In spite of this treatment, the symptoms gradually grew worse. The temperature went up every evening to 40 deg. C. (104 deg. F.), the pulse was accelerated, and got up to 150 at times; the respiration was interrupted by distressing attacks of suffocation. At this time (November 16th), in addition to the antitetanic serum, the reporter gave sixty centigrammes of phenic acid, subcutaneously, during the day. These injections were continued for six days, the total quantity of phenol amounting to 3.60 grammes; but she gave no evidence at any time of toxic action. On the 19th of November she first showed decided improvement, and subsequently steadily progressed to recovery. She was discharged on December 20th, when the cure was complete. Paucot (Le Nord medical, reported the case of an Arab chief, thirty-five years of age, whose left hand was lacerated by a gunshot wound. It was dressed with hydrogen dioxide. The wounds had nearly cicatrized and had ceased to suppurate, when on the twenty-ninth day after the injury he had trismus, and this was followed by opisthotonus and muscular contraction. He was purged with castor oil and given chloral hydrate (15.0 grammes daily) and a little morphine. Subsequently the chloral was increased to 20.0 grammes and potassium bromide 10.0 grammes was added. On the third day antitetanic serum was obtained and 40 c.c. were injected. The next day it was noted that the constrictive pains around the thorax had disappeared. Chloral was continued 15.0 grammes daily. Another serum injection (20 c.c.) was given the next day, and also the chloral. This treatment was continued for a week, when on account of a return of slight convulsions in the muscles of the legs, a single dose of the serum was given, of 50 c.c. The next morning all the convulsive movements had disappeared, the stiffness of the neck had also gone, and the patient could open his mouth easily. No more serum was given, and only one more dose of chloral (10.0 grammes). On the twenty-first day the patient was able to walk; and on the fortieth day all traces of stiffness had disappeared. 170 c.c. of serum were used within thirteen days. 225 grammes of chloral hydrate appear to have been administered in eighteen days. Hypodermic injections of morphine (gr. $\frac{1}{6}$) were given as required, about once a day. N. Y. Medical Journal.

Biliary Opotherapy in Dyspeptic Infants.

Barber and Cruet (Bulletin general de therapeutique) call attention to the fact that among certain infants, with a tuberculous heredity, or subjects of congenital syphilis, especially when overfed with cows' milk, gastrointestinal disorders are frequently observed. The babies are poorly nourished, and are pale and lymphatic. There are also indications of insufficiency of the liver function. The muscles are soft and rachitic, tuberculous, or syphilitic manifestations may be seen. The little patients are asthenic, cry very little, and are not restless, they often refuse the nursing bottle, and have the appearance of being intoxicated by the contents of the digestive tract. Constipation is frequent, especially at the beginning. The characteristic feature of these cases is the peculiar abnormal condition of the stools, as regards color, consistence, and odor. In color they are white or slightly yellow, or *cafe au lait;* at other times they are streaked, mixed with mucus, and more or less green (showing an intestinal lesion). Their consistence is pasty and homogeneous, except when masses of casein or of fatty acids are present. Their odor is that of putrefaction; sometimes more, sometimes less fœtid. The liver is generally found to be increased in volume. This syndrome, consisting of (1) signs of intoxication (pallor, asthenia, loss of appetite, etc.); (2) constipation; (3) imperfectly digested, large, white, fœtid stools; and (4) enlargement of the liver (beginning fatty degeneration), lead to the conclusion that there is insufficient excretion of bile, due to overfunction of the liver; and that this is frequently accompanied by overfunction of the intestine and pancreas. Acting upon this, Barbier and Cruet gave powdered ex-

tract of bile, in some cases combining it with pancreatine, with excellent result. The stools regained a normal color, and consistence, and lost their fœtid odor. The patients were relieved of constipation, and commenced again to put on flesh. The importance of limiting the quantity of milk to that which a child of equal weight should take, was emphasized in the discussion following this paper, as Barbier had already pointed out that an increased ration of milk in these cases aggravates the digestive troubles, and their consequences.

Cardiac Epileptoid Attacks.

Clarke (Brit. Med. Jour.) states that attacks of tachycardia or bradycardia may last for hours, days, or weeks. After a variable interval the heart tends to become exhausted, and irregularity occurs—in short, heart block takes place. Stops are felt in the radial pulse, and concurrently nervous symptoms arise which vary from the slightest feelings of sparks flashing before the eyes or the waving of a sheet before the patient, to severe epileptiform convulsions, with loss of consciousness. Yet such attacks are most certainly not epileptic. From his study of such cases the writer concludes that tachycardia is a pure neurosis, characterized by a great increase in auricular contractions from disturbed nervous influences. After a time, from over exertion, fatigue of conductivity of the band of His occurs; missed impulses result, causing longer or shorter delays in the ventricular contraction. When these delays are sufficiently prolonged, cerebral anæmia is caused, followed in due course by the nervous symptoms described. Tachycardia being a neurosis, it is, like other neuroses, commonly recovered from. The condition may persist for years, and recovery may be complete, or relapses may take place from time to time. In bradycardia we cannot be so hopeful, the ventricular pauses being due to serious structural changes in the band of His. Sclerosis of the vessels, fatty degeneration of the fibres, and an abnormal increase of fibrous tissue in the bundle have all been found. The condition is never recovered from, and the chances of sudden death from prolonged cessation of the ventricular contraction should not be forgotten. Life in true bradycardia is rarely prolonged for more than three or four years. As regards treatment, rest, both physical and mental, so far as possible, is of the greatest importance. The head should be kept low and the foot of the bed raised. Any deviation from health, such as indigestion, constipation, gout, rheumatism, etc., should be attended to. Massage may also be employed. Bromides have no effect in tachycardia, either in lowering the pulse-rate or in controlling the fits. Nerve tonics, such as valerianate or oxide of zinc, seem to do good. Strychnine, atropine, and alcohol are better avoided. In bradycardia strychnine hypodermically, with heart tonics such as digitalis or strophanthus, are sometimes helpful. Potassium iodide apparently brought about recovery in one case.

Infectious Thrombosis of the Occipital Sinus.

Uchermann (Revue Hebdom. de laryng. d'otol. et de rhinol.) reports a very remarkable, if not absolutely unique, case of sinus thrombosis, in which the infection had traveled through the most peripheral cells. The patient was a girl 18 years of age, who four years previously had suffered from an abscess of a right upper tooth, with rupture into the auditory canal, followed by a glandular abscess behind the right ear and another below it. She made a perfect recovery at the time. Some days before coming under treatment she developed a painful swelling behind the ear and at the neck behind the sternocleidomastoid, associated with chills, but without discharge from the ear. The mastoid process was somewhat tender on pressure, the tympanum only slightly reddened. At the time of the operation an abscess was found behind and below the basis of the skull. The mucosa of the mastoid process was hyperæmic, with some suppurating cells at the extremity. A second interference became necessary on account of repeated chills and very high temperatures. The sinus, which had been found to be normal at the first operation, was further exposed, as well as the jugular vein, but nothing pathological was found. The patient died at the end of two days. The autopsy showed the presence of thrombosis of the occipital sinus and of the cervical veins; also œdema of the brain. The avenue of infection had accordingly been through the most peripheral cells. The author points out that if the diagnosis had been possible the outcome might have been a different one through the performance of exposure and opening of the sinus.

The Serum Disease.—Rolleston (The Antiseptic) bases his observations on 1,100 diphtheria patients, 1,057 of whom were injected subcutaneously with antitoxin. Within a few hours of injection, cases of serum disease show a moist skin or profuse perspiration, drowsiness, local or generalized erythema, and diminution of urine. There is then a latent period of from one to eight days, with no new phenomena. The second stage is characterized by the development of urticaria, usually first at the site of injection, to which it may be limited or be-

come generalized. It is often associated with edema, especially when a second injection of antitoxin is given for a relapse or second attack of diphtheria, when the primary injection has been given some weeks or months before. Pruritus may be intense. Albuminuria may occur simultaneously with the urticaria or pre-existent albuminuria may be increased. The total excretion of urine may be diminished. The third stage does not always arrive. Usually separated by one or more days from the second, it may sometimes be continuous with it. Its most striking feature is the development of a rash, at first usually an amorphous erythema, but sometimes circinate from the first, and almost always becoming circinate subsequently. The temperature is usually raised. Malaise and anorexia are present, especially in older patients, who are more likely than younger ones to suffer at this time from pains in the joints and muscles. The submaxillary and cervical glands, and,

The Opium-Bromine Treatment of Epilepsy.—Kellner (Medical Press and Circular) says that amongst all the drugs made use of, bromide plays the leading part. In almost every case the frequency and violence of the symptoms can be diminished by the systematic use of the medicine in doses not too small. But the hope of bringing about complete cessation is not fulfilled, and he has never seen an interval of more than a year between attacks in a single case. He then made a trial of the combined opium and bromine treatment, and has become convinced that in this we possess the most reliable means of treating this illness.

He has employed this form of treatment for the last ten years, and in the following manner: The patient for fifty days gets a dose of ext. opii three times a day, beginning with 0.05 grm. Every second day the dose is increased 0.01 grm., so that at the end of the fifty days the largest dose has reached 0.29 grm. three times a day. The dose given on the fifty-first day is 0.3 grm.; it is given once, and with that the opium treatment ends, and immediately on this the bromide treatment begins. At midday and evening of the same day a dose of 2 grm. of mixed bromides is given, the mixture consisting of pot. brom. 1 part, sod. brom. 1 part, and ammon. brom. ½ part. On the fifty-second and fifty-third days 6 grm. of the mixture are given; on the fifty-fourth and fifty-fifth, 7; on the fifty-sixth and fifty-seventh, 8. From the fifty-eighth day 9 grm. are given, and continued a long time. The medicine is always given in a glass of fresh Seltzer water.

During the opium treatment the patient gets a tablespoonful of a 1 per cent. hydrochloric acid solution three times a day, but it is observable that this is not necessary, as constipation never follows the use of large doses of opium. Bismuth takes the place of the hydrochloric acid if desirable. Naturally the diet must be light and free from spices, with a preponderance of vegetables. The patient must move about a good deal in the open air, and the writer has always insisted that during the period of opium treatment the patient shall be free of all work—school work or any other. A third factor in the treatment is the baths, which are given as follows: On the first day a bath at 24 deg. C. of ten minntes; on the second day one at 23 deg. C. of nine minutes; on the third day one at 22 deg. of eight minutes; and so at the eighth day a bath at 17 deg. C. and of three minutes is reached. It remains at this up to the fifteenth day, then from the sixteenth to the twenty-third a bath at 17 deg. C. is given for four minutes; from the twenty-fourth to the thirty-first one of 17 deg. C. and five minutes, from the thirty-second to the fiftieth a bath at 17 deg. C. for six minutes.

This treatment is not followed out in weak patients or those whose minds have already given way. It has been limited, therefore, to those who have retained some mental power or to epileptics who were otherwise in fair health, and the dose stated is reckoned for a full-grown healthy man and not for a child.

The results are as follows: Excluding five still under treatment, eighty have undergone the course. In sixteen (20 per cent.) of these the treatment had to be interrupted, as the opium could not be borne. In six (7.5 per cent.) the treatment failed; a diminution in frequency and severity of attacks was noted in 23 (29 per cent.). A considerable improvement in that the attacks return only at intervals of several months or their place was taken by attacks of giddiness, thirteen cases (10 per cent.). In twenty-two cases (27.5 per cent.) the patients have remained completely free since the treatment, in one case eight months after completion of the course; the others have been free for from two to six years. For success in this treatment it is very important that the patient should lead a very quiet life, free from all excesses both during and after treatment. When epilepsy comes on first later in life the prognosis is bad. Those cases that have remained free from the disease have all been between 15 and 30 years of age.

Phthisis Pulmonum and Abortus Provocatus.—de Bruine Ploos van Amstel (Beitraege zur Klinik der Tuberkulose) asks and attempts to answer the question:

"Is pulmonary tuberculosis an indication for the artificial interruption of pregnancy?" The answer is in the affirmative, and almost a hundred pages are taken up with the arguments advanced by the writer in defense of his position in this problem. The question is considered in all its aspects, including the moral and legal, numerous and extensive quotations are cited from the literature of the world, and each quotation, each cited opinion, is subjected to a sharp critical scrutiny. The final deductions of this essay undoubtedly are based upon a very careful consideration of an enormous material, and therefore demand the attention of every physician who may be called upon to pass judgment concerning the proper mode of procedure in a case of pregnancy complicated by a pulmonary phthisis.

A study of the laws of most European countries reveals the unsatisfactory condition that in most instances no distinct provisions are made that the physician who performs an abortion for medical reasons in an attempt to save the mother's life is exempt from punishment. The writer advises strongly such changes which will make this point absolutely clear.

In next taking up the purely medical side of the problem, the essayist first endeavors to formulate an answer to the question: "Does tuberculosis show an untoward effect upon pregnancy?" Practically all authorities agree that such a harmful effect is exerted. While most writers believe that abortions and premature births are very frequently caused, Ploos thinks that this result is not very common, at least, not in the early stages of the disease.

More difficulty is encountered in furnishing a definite answer to the second question: "What is the condition and future of children borne by these mothers?" In a few well authenticated cases children have been born with unmistakable signs of a tuberculosis acquired during intrauterine life. Theoretically a direct germinative infection of the ovum through an infected spermatozoid, like in syphilis, might be assumed, but the existence of this mode of infection never has been established. A placental transmission of tubercle bacilli is possible, but certainly is a rare occurrence. Of greater practical importance is the increased predisposition for infection of children issuing from tuberculous parents, and the increased risk of acquiring the infection by the close association with their diseased parents. A hereditary predisposition for tuberculosis is almost generally conceded. The imminent danger existing for these children of acquiring the infection at home is well illustrated by such observations as made e.g. by Bernheim. In three sets of twins he permitted the respective mothers to nurse one child of each set, while the other was turned over to a wetnurse. All three babies nursed by their own diseased mothers died, while the three others survived.

The essayist comes closer to the main topic of his paper with his third and fourth question: "Have pregnancy, labor and the puerperium a harmful effect upon the course of a pulmonary tuberculosis, and if so, does this fact justify abortus provocatus?" In general it can be stated that such a harmful influence does exist; it is more pronounced in labor and during the puerperium than in the course of pregnancy. The essayist is willing to accept Kaminer's dictum: "Almost always it means misfortune for a tuberculous woman to become pregnant." A woman predisposed to tuberculosis may develop an acute phthisis during pregnancy, but more often she does in the puerperal state. The practical conclusions to be drawn from these facts are the following: It is the duty of the physician to warn a tuberculous girl against marriage. Ploos regrets the fact that European countries do not possess laws prohibiting the marriage of persons suffering from tuberculosis, and points with envy to the advanced position taken by some of the United States. A married woman must be warned against impregnation by advising facultative sterility. If the physician is consulted after impregnation has occurred, he must inform the prospective mother of the fact that her pregnancy must be regarded as a serious complication of her tuberculosis, and should advise immediate interruption of pregnancy. Since with the advance of both the disease and pregnancy the danger proportionately increases, the indication and justification for artificial interruption of pregnancy are most evident in an early stage of both the disease and the pregnancy. But the indication for abortion undoubtedly also exists in far advanced cases of tuberculosis. If the mother is in an entirely hopeless condition, premature birth may be resorted to in an attempt to save a viable fetus. It may be emphasized that the essayist repudiates the restriction made by some writers to the effect that artificial abortion should be performed only after a deterioration in the mother's condition has become noticeable. He defends his radical position by his observation that for children of tuberculous mothers the chances to be born healthy and strong are very slim.

The author's fifth question reads: "Does abortion check that rapid progress of the phthisis for which pregnancy is held responsible?" The answer is not very precisely given, but if we understand correctly

the writer's idea, we would formulate it as follows: Abortion positively checks the progress of the disease in some instances, but it certainly always removes a decidedly injurious factor. Of course, if pregnancy is interrupted very late, the harmful influence was potent for a long time, the patient is in a bad condition and the immediate harmful effect of labor itself may upset the possible beneficial effect to be expected from the interruption of the pregnancy. All these arguments then would speak in favor of early abortion.

The writer finally propounds his last question: "Which method of abortus provocatus is the least dangerous to the patient?" Certainly a method which does not call for the use of a general anesthesia. For early abortion Ploos recommends the method of Oehlschlaeger, which consists in the injeetion of 3 or 4 grams of tincture of iodine into the uterine cavity. This injection, if possible, should be made a few days after the expected menstruation has not appeared. If done in later months, it should be accompanied or followed by a curettement. An abortion in the third and fourth month requires the instrumental dilatation of the cervix for the introduction of two fingers. The ovum is freed and expressed, then the uterine cavity curetted.

Automobile Injuries.—Kettner(Deutsche medizinische Wochenschrift) says that coincidently with the development of methods of transportation of increased rapidity a corresponding augmentation of traumatic injuries has taken place. A considerable variety of lesions is already ascribable to the use of the automobile, and presumably the number of casualties of this nature will undergo a steady increase. A characteristic form of injury is the fracture of the forearm, which is not infrequently caused as the result of back-firing in cranking the motor, and this will be caused to disappear only when methods for starting the motor automatically have been evolved. A very unusual injury resulting from the introduction of the automobile omnibus is reported by the author. The patient was a boy of thirteen years, who, in stepping from a street car, was run down by a rapidly advancing motor omnibus. The front wheel of the vehicle, in passing over his left leg, completely stripped from it all of the skin and subcutaneous tissues from the ileum in front and gluteal region behind to the first and second toes, so that the muscles and tendons were all exposed, as in an anatomical dissection. The patient's condition was fairly good, so that the attempt at conservative treatment was deemed justifiable. The skin flap was cleansed and wrapped around the limb again, but on the fifth day it was seen that the huge flap was becoming gangrenous and it had to be removed. During the next eight weeks the patient made satisfactory progress, and some form of skin-flap transplantation was being considered, but a change for the worse occurred and, on account of the boy's general condition, amputation at the hip was performed. A month later he died of bronchopneumonia.

The Vibrating Sensation in Nervous Diseases.—Williamson (Brit. Med. Jour.) states that when the foot of a vibrating tuning fork is placed over subcutaneous bony prominences in many parts of the body, a peculiar "vibrating sensation" is felt, to which the names "bone sensation" and "pallæothesia" have also been given. The writer has tested this vibrating sensation in a large number of nervous diseases, and sums up his observations as follows: 1. The vibrating sensation is a delicate test for detecting slight impairment of sensation. It may be lost when other forms of sensation (to tactile impressions, pain, and temperature) are felt quite well or are only slightly impaired. This is sometimes the case in early tabes, in slight peripheral neuritis, and often in diabetes mellitus. 2. In diabetes mellitus the vibrating sensation may be lost on the feet, or feet and legs, when there are no other nervous symptoms; but often the latter are present. In many cases of diabetes the nervous symptoms are chiefly (a) severe pains, tenderness, and hyperæthesia in the legs; (b) loss of the tendo Achillis jerks; (c) loss of the vibrating sensation. 3. In diseases strictly limited to the motor structures, the vibrating sensation is not lost, even at an advanced period of the disease. Amyotrophic lateral sclerosis is an example of this. In any case in which the disease appears to be one causing lesion only of the motor parts of the nervous system, if it should be found that the vibrating sensation is lost, this fact indicates that the disease is affecting also sensory structures; and thus it may be of diagnostic value. 4. In cases of paraplegia from spinal caries and occasionally in spinal syphilis, the loss of the vibrating feeling may be the only objective symptom of affection of sensation at an early stage of the disease. 5. In hemianæsthesia, if the vibrating feeling is lost when the foot of the tuning fork is placed on the edge of the sternum on the side of the tactile anæsthesia, but felt on the other side, the case is one of hysterical or functional anæsthesia, or of malingering; whilst in hemianæsthesia due to organic disease the vibrating sensation is felt when the foot of the vibrating tuning fork is placed on the edge of the sternum on the side of the tactile anæsthesia.

General Anaesthesia.—Hewitt (Lancet) specifies the three main principles under which anæsthetics should be administered as follows: 1. The selection of appropriate anæsthetics. 2. The maintenance of unembarrassed, and particularly of unobstructed, respiration during and after the administration. 3. The proper adjustment of the percentage or strength of the anæsthetic gas or vapor. A common error is the employment of an asphyxiating agent as an anæsthetic in cases of potential or actual respiratory difficulty. The same holds good of asphyxiating methods, such as those by which ether and ethyl chloride are respectively administered. Nitrous oxide should never be given where the air way is encroached upon, as in angina Ludovici, in thyroid enlargements, or in sublingual abscess. The safest anæsthetic in such cases is a chloroform ether mixture, in the proportion of two to three. Should the patient be dyspnœic, rebreathing is to be avoided, and chloroform should be used. Ether should not be given to emphysematous, bronchitic, or phthisical subjects. Patients with cardiac disease usually stand anæsthesia well, providing asphyxiating methods be avoided. Chloroform or a chloroform mixture should not be used for the operation of circumcision; during this and similar operations there is a great tendency, unless the patient be deeply anæsthetized, for reflex respiratory, as opposed to reflex circulatory, disturbance to arise, and this respiratory disturbance is far more likely to prove dangerous under chloroform than under ether. Over-dosage of the anæsthetic is not the most common cause of respiratory difficulty. Four distinct modes of respiratory arrest occur during surgical anæsthesia. Breathing may cease (a) from the presence of muscular spasm or some other condition within the air passages, causing occlusion of those passages; (b) from some external agency preventing lung expansion; (c) from a diminution or arrest of the blood supply to the respiratory centres; and (d) from the toxic effect of the anæsthetic upon those centres. A frequent cause of difficulty in inducing and maintaining anæsthesia is the presence of partial or complete nasal obstruction. Whenever practicable or albreathing should be secured and maintained in preference to nasal breathing, for the latter is often inadequate, retarding the onset of anæsthesia and leading to hyperpnœa, venous engorgement, and abdominal rigidity. The anæsthetist should be absolutely certain that respiration is being freely performed—he should either hear or feel every respiration. By the most careful attention to symptoms the anæsthetist may, in the great majority of cases, and particularly toward the close of operations, permit the patient to display a slight trace of corneal reflex. In adjusting vapor percentages careful attention should be paid to the particular type of subject, children and aged and anæmic persons naturally requiring weaker percentages than others. Tall, plethoric, muscular, and alcoholic subjects usually require very energetic treatment.

Plague.—Simpson (Lancet) in his second Croonian lecture, discusses the pandemic of plague prevailing at present, especially in India, and states that the prevention of plague is the most important question for India and England at the present time. It is now accepted that the importation of plague into a healthy locality can be effected by an infected human being, or an infected rat, or infected clothes. Infected grain may also be an agent in the importation of the disease. Once imported, the dissemination of the disease is effected by similar agents as those bringing about importation. Except in pneumonic cases rats are the principal agents in the dissemination of the disease, though personal contact, as in typhoid fever, plays a part. The writer accepts Simond's theory that the flea on the rat, leaving the rat dead from plague, and then biting man, transfers plague from the rat to the man. But the flea theory accounts for only a certain percentage of the fatal bubonic cases. It has been proved beyond dispute that the plague bacilli taken in contaminated food multiply while the food is in the intestines, enter through the lymph channels or lacteals of the intestines and invade the blood in swarms. The only qualification is that the microbes shall be so protected as not to be affected by the gastric juice.

Operative Treatment of Phlebitis.—Senechal advocates the operative treatment of phlebitis as the most rational one to be used, These inflammations of the veins are acknowledged to be infectious. Excision of the inflamed area will bring about a cure in from two to three weeks, where medical treatment would mean months of disability. At the same time recurrence, when operation is promptly done, will be prevented. Operation is followed by no accidents or bad results, and is not dangerous to the patient. The author has made many resections for phlebitis and has never had any bad results. The treatment varies with the size and severity of the inflammatory process and its location. The general technique consists in absolute asepsis; incision of the skin, linear if only one vein is affected, lenticular when many are involved, with the removal of the diseased skin; ligature of the efferent veins beyond the

thrombosis, ligating in healthy tissue, not less than three centimeters from the clot. The vein is then removed between the ligature and a pair of compression forceps and followed by closure of the skin wound. The author describes minutely the technique to be used in various kinds and locations of thrombosis.—Gazette des Hopitaux.

Causes of Colitis, with Special Reference to Its Surgical Treatment.

Lockhart Mummery (Lancet) presents a tabulation of thirty-six cases under the headings of sex, age, symptoms, duration, and conditions found. In several cases no cause whatever could be ascertained. A large variety of lesions were respectively present in the other cases. In a group of five cases cancer of the sigmoid flexure was present, in quite a large group catarrhal inflammation was observed, showing varying degrees of congested mucosa, hypertrophy, small polypi, papilloma of rectum with malignant base, ulcerations, etc. The author has found this latter group the hardest to cure, although the patients are easily made more comfortable. A group of cases presented inflamed appendices. The author says we do not know exactly how appendicitis may cause colitis. He advances the following possibilities: (1) Appendicitis is generally accompanied by inflammation of the ascending colon and cecum, and in some cases this inflammation of the colic mucosa may spread into the transverse colon and even reach the sigmoid flexure. It is not uncommon during the operation for appendicitis to find that the inflammation has spread into the ascending colon. (2) Appendicitis may also cause colitis by the formation of adhesions between the appendix or cecum and the sigmoid flexure. These adhesions by interfering with the lumen of the gut either through direct constriction or by causing abnormal flexures and angles may result in a local inflammatory process being set up and the symptoms of colitis subsequently develop. The first result of such adhesions is usually constipation, to be followed in a shorter or longer time by diarrhea and the passage of mucus. (3) It would seem probable that a chronically inflamed appendix may cause symptoms of colitis by the frequent discharge of septic material into the bowel. It has become customary to describe the colon and rectum as septic channels, though there is no justification for this. As a matter of fact, septic organisms are not at all usually numerous in the large intestine and the pathogenic flora of the mouth is far more numerous than that of the rectum and colon. Even the skin is a more common habitat for septic organisms than the colon. It is not surprising therefore that a chronically inflamed appendix which is continually discharging septic organisms into the bowel may be the cause of colitis, just as we know that carious teeth and septic conditions of the mouth can cause gastritis. We have very positive evidence that removal of an inflamed appendix will in many cases lead to a complete cure of colitis.

The Treatment of Lupus.—Dreuw (Lancet) states that there is no single method which can definitely cure every case of lupus so that no recurrence will take place. The methods of treatment in general use at present are as follows: (1) Physical (Finsen light, Rontgen rays, and radium); (2) chemical (caustics); (3) mechanical (surgical methods); and (4) internally acting substances (cantharadin, tuberculin). Treatment by means of the Finsen light, and Rontgen rays are only within the reach of a few specialists. The author introduced two years ago a method by which the general practitioner can treat lupus cheaply, easily, and with success. The lupus patch which is to be treated is frozen by means of ethyl chloride (or by carbonic acid gas if a deeper effect is desired) until it is snow white. Over this frozen surface crude hydrochloric acid is rubbed thoroughly and with a certain degree of force. According to Unna it is advantageous to saturate this crude hydrochloric acid with chlorine. The acid is applied in the following way: Cotton wool is wound round one end of a small wooden stick of about the size of a penholder; this is dipped in the crude hydrochloric acid and rubbed on the frozen surface, pressing slightly, till the nodules become of a grayish white color (reaction). This grayish white color occurs first where nodules are and then in the skin surrounding the nodules. In this way a large surface can be treated at once by a succession of applications of the caustic. If the patch it very large, it is best to administer chloroform. The spots are then similarly thoroughly frozen by preference with carbonic acid gas, and then by the above mentioned means the crude hydrochloric acid is energetically rubbed in. This freezing and cauterization under general anæsthesia is especially suitable (1) in lupus multiplex and lupus exulcerans; (2) in lupus of the mucous membranes, the nasal cavities, the lips, and the tuberculous abscesses and fistulæ (cauterize from six to eight times in rapid succesion); and, (3) where the freezing is not well borne by the patient (*c. g.*, nervous and sensitive patients) or where very energetic cauterization is necessary—*c. g.*, in tuberculous ulcers, lupus hypertrophicus, and verrucosus. The advantages of this method are summarized as

follows: 1. The method is simple, cheap, rapidly effective, and gives good cosmetic results. 2. It can be carried out at home without hospital treatment, and that is especially important for patients of limited means. 3. Complicated apparatus is not necessary, therefore the method can be applied by any practitioner. 4. The method can be applied in all forms of lupus and in all situations, with the exception, perhaps, of the eye. Favorable results are obtained by repeated cauterization, especially in lupus of the nasal cavity. 5. As a preliminary treatment for later Finsen treatment one gains time and gets favorable results.

Lesions of the Brain — Exploratory Puncture.— Ascoli (Berliner klinische Wochen schrift) says that in cases of brain leasions which appear to be localized, but whose exact location and nature are uncertain, exploration should be practiced on the suspected parts with a hypodermic needle mounted on a large syringe and inserted through a hole bored in the skull by a dental engine carrying a fine drill.

The skull over the suspected part is exposed by a small incision, and a small drill is applied at right angles to the skull. Great care must be exercised to stop the motor the instant resistance ceases as the dura must not be injured. As soon as the bone is penetrated, the handle is removed from the drill, which is left in position as a guide. Great care is necessary when the drill is removed, as the least slipping of the soft parts may conceal the hole, which owing to its small size is difficult to find. The drill having been withdrawn and replaced by the needle of the syringe, this is pushed carefully forward, the piston being drawn back slowly until liquid appears. If the puncture is negative another is made at the next suspicious spot, and this may be repeated as often as desired, no harm being done if the meningeal vessels are avoided. In this way abscesses, cysts, hemorrhages, necrotic tumors, tuberculosis, and even gliomata may be located, the nature of the mass being determined by microscopic study. The depth to which the needle may be pushed depends on the case, but ordinarily it is not wise to push it beyond a depth which could be reached by operation if the mass were of a nature demanding removal. This operation has the advantage over the exploration by removal of a skull flap that it is less harmful and covers more ground.

Posture and Cardiac Signs.

Gordon (Lancet) has studied the influence of bodily posture on cardiac physical signs, and concludes that in most cases the change from the erect position to the recumbent: 1. Raises and narrows the normal cardiac dulness. 2. Makes the first heart sound duller and the second sharper, thus producing the classical "lub dup." 3. Diminishes the anteroposterior diameter of the chest. 4. Markedly narrows the dulness of an enlarged heart. 5. Increases the loudness and area of audibility of (a) "hæmic murmurs," both at the base and the apex; (b) mitral and tricuspid regurgitant murmurs; and (c) aortic stenotic murmurs. (Some of these murmurs may be only audible in the recumbent posture.) 7. Leaves unaffected the murmur of aortic regurgitation. 8. Increase the loudness of the accentuated pulmonary second sound. 9. Makes more marked the reduplication of the reduplicated second sound. (In some cases the reduplication is only heard in the recumbent posture.) 10. Causes the partial or complete disappearance of the cardiac dulness in certain cases of cancer in their later stages. Taking all these facts into consideration the writer submits that no description of the cardiac physical signs can be regarded as complete which does not include a statement of the position of the patient at the time of observation.

Abdominal Pain.

Lennander (Edin. Med. Jour.) remarks that in estimating abdominal pain, and especially pain in connection with lesions causing the symptoms of ileus, one has briefly to remember that pains do not originate within the abdominal organs which are supplied only by the sympathetic cord and the tenth nerve; that, on the contrary, all pains originate in the abdominal wall, more especially in the parietal serous membrane and subserous connective tissue, which are innervated by the cerebrospinal nerves. Every stretching of the parietal attachments of the stomach and intestines, i. e., of the mesenteries, as well as of adhesions to the abdominal wall, is very painful; the same applies to the displacement or stretching of the parietal serous membrane in relation to the muscles or aponeuroses of the abdominal wall. Most of the lesions causing obstruction are attended by increased and, as a rule, irregular peristalsis. Chemically different substances, such as the contents of the stomach, gallbladder, bowel, or of an abscess, when they come into contact with a healthy or hyperæmic parietal peritonæum, give rise to severe pain; and even that form of acute peritonitis which goes under the name of "peritoneal irritation" greatly increases the sensitiveness of the parietal serous membrane. The sensitiveness of the parietal peritonæum increases at the same rate as the inflamma-

tion, but decreases again when the inflammation has reached a certain degree, and may ultimately in many cases cease.

The Parathyreoid Glands and Tetany.

Leischner reports the results of experiments made upon rats, with regard to the effects produced by the transplantation of the parathyreoid glands. When one gland was dissected free and replaced in the wall of the abdomen, between peritonæum and the muscle, or in a pocket in a rectus muscle, no symptoms were produced; but when both glands were transplanted, transitory symptoms of tetany appeared. When the parathyreoids were afterwards again removed, the animal soon presented the symptoms of tetany and cachexia. The histological examination of the transplanted glands did not show any morphological alteration. In another series of experiments he found that the parathyreoid gland could be successfully transplanted from one animal to another of the same species. He directed attention to the importance of these results in their application to human surgery. Since removal of the parathyreoids inevitably leads to tetany, it is advisable, in all cases of thyreoidectomy, to see that the parathyreoids are not removed in the mass; and when this is found to be the case, they should be immediately transplanted and imbedded in the rectus muscles of the abdomen. In discussing the subject, von Eiselsberg said that out of 449 thyreoidectomies for goitre, which had been done at his clinic in the last four years, he had only observed two cases of grave tetany, and in both cases this accident was successfully met by administration of dry thyreoid extract. In one case of tetany of long standing (twenty-seven years), von Eiselsberg transplanted, into the abdominal wall a parathyreoid gland taken from another patient who had been operated upoe for goitre. As a result of this procedure, the tetanic symptoms decidedly improved. The patient from whom the parathyreoid was taken did not present any symptom of parathyreoid insufficiency.—La Presse medicale.

Gabritchewski's Scarlet Fever Vaccine.

Shamarine (Roussky Vratch) reports good results with the preventive use of Gabritchewski's vaccine for scarlet fever. This vaccine is made from streptococci isolated from the blood in the hearts of children dead of scarlet fever. It is condensed bouillon culture of streptococci killed by heating to 60 deg. C., and the addition of ½ per cent. carbolie acid solution. Each c. c. contains 0.02 to 0.03 of the bacterial mass. The vaccine was first used in Moscow in 1904. Usually ten drops were injected with the ordinary hypodermic syringe. The injections were made during an epidemic of scarlet fever, 185 persons being thus treated as a preventive measure. A rise of temperature was observed in all but one. A moderate rise in sixty-four persons, a faint rise in fifty-four, a marked rise in sixty-six. Local tenderness was seen in sixty-six patients, redness in the injected area in 173; swelling in 103. In many cases there was a rash resembling true scarlet fever, and in five patients there was desquamation. There was a general rash in seventy-two of the 185 patients, only two developed scarlet fever, the remainder remained well, save that they showed these temporary complications after the use of the vaccine.

Backwater Fever.

Costello, (Dub. Jour. Med. Sci.) of Northern Nigeri, West Africa, in speaking of the precautions against backwater fever, observes that persons who live in those parts of tropical Africa, or other places, in which this diease occurs, ought never to make light of fever, however small, but should, as a premonitory sign of fever, or fever itself, shows itself at once go to bed for treatment. In the interpyrexial periods prophylactic measures should be adopted in the form of quinine regularly taken, also a tonic, consisting of iron, to improve the quality of the red blood corpuscles. The individual should try as far as possible to avoid excessive exposure to the sun or rain. It must be born in mind that backwater fever occurs in England amongst subjects who have been previously living abroad in a blackwater area, and consequently people ought to be informed of this fact and put on their guard against contracting chills, especially when changing from a tropical to a temperate climate on the voyage homewards. Moreover, they should be advised not to fail to take quinine and a tonic if necessary while on leave.

Responsibility of Hysterical Patients.

Crocq tells us that the responsibility of hysterics varies considerably with the especial case observed; in each case we must consider the acts and circumstances, and whether the patient acts in one of his attacks or in a lucid interval. Hysteria results from a condition of hyperimpressionability, with diminished cerebral control and hypersuggestibility. There is a distinct perturbation of the mental state. Hysterics differ in the gravity of the mental state, according to the type of mental trouble. When there is little brain trouble the patient may be regarded as responsible. If there is marked mental loss of equilibrium the patient becomes absolutely irrespon-

sible. Acts committed in an attack are not responsible acts, while between the attacks the patient can comprehend and understand his acts. In some states there is an entire loss of consciousness, insensibility, and disorientation. Hence all such acts must be carefully studied, as there are very great difficulties in determining responsibility.—La Revue Medico-Sociale.

Diagnosis of Barlow's Disease.—Starck (Munch. Med. Woch.) says that the picture in infantile scurvy is rarely typical, and that diagnosis must often be made from the appearance of one or two symptoms. When a child between the ages of five and fifteen months loses appetite, is sleepless, and gives evidence of pain in dressing and undressing and on movement, we should think of scurvy rather than rickets. Scurvy is more apt to occur in families that are better off and in which the child has been fed on prepared foods than among the poor who nurse their children. The typical symptoms are anemia, hemorrhagic swelling of the gums, pain on movement, swelling of one or more extremities, hematuria, and hemorrhagic swelling of the eyelids and exophthalmos. Anemia may be a symptom of other conditions. Swelling of the gums is absent in children whose teeth have not yet appeared. When present the gums take on a bluish-red swelling and bleed easily. Hematuria may not be present. When calomel is given to a syphilitic child it is well borne, but in scurvy a single dose may produce stomatitis. The amount of alteration of the bones depends on the pathological changes. There may or may not be hemorrhage between the epiphysis and diaphysis. It affects the long bones of the lower extremities first, then those of the upper, later the ribs. It is generally symmetrical on the two sides. The X-ray shows an increase of shadow between the ends of the shafts and the epiphysis, followed by atrophy. Swelling of the lids and exophthalmos result from hemorrhage into the orbit. The immediate curative effect of vegetables and fruits is of digestive value.

Enuresis in Children.—Cavalieri (Riv. di Clin. Ped.) finds that the reason for the unsuccessful methods used for treatment of enuresis in children is the lack of accurate knowledge of the causes of the condition. Unless we know the cause in a given case we cannot properly direct our therapeutic measures. He defines enuresis as a condition of involuntary evacuation of the bladder in children over two years of age, who have normal brains and no anatomical lesions or lack of development. This definition will exclude all children who have hereditary or congenital brain troubles or deformities; all spinal cord troubles, epilepsy, and diabetes, as well as those affected by fear. He considers separately the direct and remote causes of the condition. The condition is essentially a neurosis, and we constantly find hereditary neurotic conditions as the remote cause. According to some, the anatomical substratum of the condition is a hypoplasia of the central nervous system, and it is a true symptom of infantilism. According to others it is a manifestation of hysteria. The immediate cause is a hyperexcitability of the *detrusor vesicæ* with a relaxation of the sphincter of the urethra. According to another theory, it is due to a lack of development of the prostate resulting from lack of closure of the bladder orifice. Four forms are recognized by the author, in all of which the usual dietetic and hygienic measures are useful. In hyperexcitability of the detrusor, extract of belladonna administered at night in increasing doses is the best remedy. Valerian and hot baths are also useful. When there is deficiency of the sphincter of the urethra strychnine hypodermically is useful, also cutaneous faradization over the bladder and sacrum. For reflex enuresis the removal of the cause is the proper treatment. With deficient muscular apparatus of the prostate and nonclosure of the bladder there are usually other deformities. Massage and dilatation of the urethra are useful. The most modern measure is the injection of physiological salt solution into the spinal canal, the needle entering in the *hiatus sacralis*. Most brilliant results have been obtained by Cathelin. The effect of the injections is supposed to be a stimulation of the roots of the nerves.

Infantile Tubercular Testicles.—Poissonnier (Gaz. des Hop.) says that tuberculosis when localized in the genital organs of the male infant is primary in the testicle, secondary in the epididymis, which is the contrary of what occurs in the adult, in whom the epididymis is affected sooner than the testicle. In the infant there is an orchitis. It may occur in a child of any age, even in the fetus at term, or a few days after the birth of the child, and is more frequent in the young infant than in the child, until he has arrived at puberty. It is generally single. Traumatism and masturbation may be causes, but heredity is the most powerful factor. The affection may come by way of the circulation, by way of the lymphatics, or from the epididymis. The scrotum presents the same lesions as in the adult. Generally the epididymis is also affected. The efferent canal may be involved, and even the prostate. It may be propagated to distant regions by the blood or lymphatics. The inguinal glands are

often involved, as well as the iliac and lumbar. There are several forms of the disease, acute and chronic. The testicles become tender, swollen, adhere at one point to the scrotum, and an abscess and a fistula form. In more chronic cases there is no abscess formation and little pain or tenderness. When caseation occurs an abscess soon forms in the testicle. It may be limited by fibrous formation and not open externally. The only complication to be expected is the generalization of the tubercular process. The prognosis when this does not take place is good. Cicatrization occurs, with a greater or less amount of useful testicular tissue. The affections from which it has to be differentiated are syphilis, cancer, and gonorrheal orchitis. The treatment should be conservative. Knowing that a certain amount of useful testicular tissue usually remains after healing, it is best not to remove the testicle. Suspension, puncture with injection of iodine or iodoform, curettage, and cauterization are the best local measures. The most important treatment is general and hygienic, and does not differ from that of tuberculosis localized elsewhere.

Prophylaxis of Infantile Enteritis.—Paul Londe (La Presse Med.) says that more intestinal troubles arise from overfeeding than from any other cause. The infant should not be fed in quantities in proportion to its weight, but to its stage of development and digestion. It is much better to underfeed than to overfeed. Mothers and even physicians give the infant more food materials than it can take care of. A large proportion of infants grow and remain in good physical condition on a ration much less in quantity than that usually prescribed by physicians. The efforts of the physician should be directed to lessen the accumulation of weight in the infant rather than to increase and hurry it. The mother or the nurse should never be allowed to increase the amount of food to be taken. That should only be done under the physician's orders. As soon as the stools are fetid, of bad color, or loose, and the infant cries with pain, it is time to reduce the ration. It should not be increased until the normal state of digestion has returned. Milk should be the only food until the child is two years old. Then porridges, soups, and eggs may be begun cautiously. If there has been a severe enteritis, after the water diet, milk may be given in doses of a coffee spoonful in three of water, and this may be doubled each day. Vegetable soups will not be useful because the pancreatic ferments are not as yet formed. Human milk may be the only remedy that will be of value in some cases, and that must be obtained at any cost, by means of a wet nurse if the mother has none. Superalimentation is the principal cause not only of enteritis, but also of most of the infantile troubles of a non-specific nature, such as bronchitis and broncho-pneumonia.

Cancer of the Uterus.—Laurent (La Revue Medico-Sociale) summarizes the definition of cancer as a disease that is often latent and insidious, manifesting itself by the triad of symptoms, pain, hemorrhage, and leucorrhea. Pain results from infiltration of Douglas's cul-de-sac, pressure on the sacral nerves, and concomitant metritis, while it may be absent in the ulcerations produced by the disease. It is especially early in cancer of the body. The lymphatics and parametrium may be invaded early or very late. The ligaments are early attacked in most cases. Cancer of the body is slower and less malignant than that of the cervix. Duration is from six months to eight years. One-third of the cases of cancer of the uterus are of the cervix. It may be pavement epithelioma, cylindrical, or atypical epithelioma. In form it may be papillary, nodular, or excavating. Cancer of the body may be primary or secondary to that of the cervix. It is a cylindrical epithelioma, circumscribed or diffuse. Cancer extends to the vagina, adnexa, parametrium, glands, ureters, bladder, peritoneum, heart, and by metastasis to the other internal organs. It has to be distinguished from chronic metritis, benign papilloma, fibroma uteri, and polypus. It is more brilliant and granular than metritis, and more friable. Benign papilloma does not present condylomatous growths. Fibromata or papillomata of the cervix appear with the ring of the cervix surrounding them.

When Shall Myomata be Removed?—Wiesswange (Munch. Med. Woch.) says that the mortality among 2,500 operations for myomata was for abdominal 6.8 per cent. and for vaginal 2.2 per cent. The question of operation depends on various factors. One of these is the location of the myoma, whether subserous, intramural, submucous, or intraligamentous. Another important consideration is whether it springs from embryonal remains, gland structure, or musculature. Submucous myomata generally give symptoms that are of importance, most frequently hemorrhage and pain. Hemorrhage may be of any grade of severity. If severe, operation is demanded. Pain will also vary. The diagnosis of this form is difficult with a closed cervix. Dilatation is a diagnostic aid that may be necessary, and removal of a fragment and its

microscopic examination will be of value. It is often necessary to remove such growths to make life endurable and useful. Another danger is necrosis of the growth, with possible infection of the patient. Such an ending is not at all to be desired, but it is the only way of getting rid of the growth outside of operation. The growth may also become sarcomatous. The author believes that every submucous fibroid should be removed. With the subserous it is quite different. Profuse hemorrhage is rare, and pressure symptoms alone are of importance. Conception and successful delivery may take place normally. Only when these tumors become very large is removal imperative. The intramural and interstitial forms give the least trouble of all. Multiple fibromata are often harmless. Only very large and rapidly growing interstitial myomata require removal. The intraligamentous form gives severe pressure symptoms. Each individual case must be considered separately. The earlier in life the growth appears the better is the prognosis of operation. In young individuals conservative work may be done. The nearer the climacteric the longer may we delay operation. Unoperated cases should remain under careful observation.

Occurrence of Goiter in Parent and Child.—Jones (Brit. Jour. Child. Dis.) reports a case in whom at the age of five and a half years, the mother noticed a fullness in the neck that had increased fairly rapidly at first and then more slowly, but which was still growing six months later. No other symptom had been noticed. The diagnosis of parenchymatous goiter was made and thyroid extract was administered. Within two weeks from this time the size of the tumor had obviously diminished. After this the shrinking progressed more slowly until the gland had attained its normal size in about ten weeks. The mother, aged 37, had had for some eight years an enlargement of the thyroid affecting chiefly one lobe. After six weeks of administration of thyroid extract, the swelling was perceptibly smaller and an adenoma was clearly defined. The writer says that it is not certain that there is any disease of the thyroid that is hereditary in the biological sense, that is, is due to a transmissible innate variation; so that any part that heredity may possibly play must be an indirect one connected with perhaps the question of susceptibility to certain poisons.

A Philadelphia physician says lying is a symptom of disease, but refrains from making an estimate of the number of sick people in his native town.

Miscellaneous.

Typhoid Fever and Modern Treatment.

Good elimination should be maintained from every gland and emunctory, writes W. T. Marrs, of Peoria Heights, Ill. Every secretion should be aroused and made to do its best. Calomel in small doses is one of our best remedies. Salines are nearly always indicated. Abbott's saline laxative is pleasanter and better than crude salts. He has observed that if the bowels act not less than twice daily, the course and severity of the disease is modified. The old idea that in typhoid the bowels should be kept confined for a few days at a time, is now looked upon as having an untenable theory. The more debris and toxins are eliminated, the less will the disease be compelled to oxidize by the process of fever. The more water the patient drinks, the more the poisons eliminated or diluted, thus lessening their absorption. In case of hyperpyrexia, give a colonic flushing and the high temperature usually comes down a degree or two. The sulphocarbolates (W-A Intestinal Antiseptics) should be given to neutralize remaining foci of infection? Patients treated along this line seldom require the cold bath. Tepid spongings at frequent intervals usually serve a better purpose than the bath of low temperature. —"Merck's Archives."

Kelene.

Pure Chloride of Ethyl (Fries Brothers) is being more and more recognized as a most valuable Local Anesthetic. Its many advantages include being harmless, no matter how frequently used, always ready for instant use, easily applied with uniform results, convenient to carry. These are all important points for the operating surgeon.

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The Pennsylvania Anti-vaccination League issued a call for a conference to consider the advisability of carrying the question of compulsory vaccination into the political campaign. The members of the League will be urged to pledge themselves to support only the candidates who will promise to work for the repeal of the compulsory vaccination law.

An eccentric but very able professor, says the Pharmaceutical Era, called into his chemistry room a student he particularly disliked.

"What is prussic acid, sir?" asked the professor.

"A very deadly poison, sir."

"Correct, sir. One drop on the end of your tongue would kill a dog."

Sir Frederick Treves, the eminent English surgeon, believes Japan will eventually have one of the most remarkable schools of surgery that has ever been known to history, says the Medical Times. At a dinner of the Japan Society in London Dr. Treves remarked:

"You will understand why; there is the infinite patience of the people, their infinite tenderness. Kinder, more sympathetic people do not exist. Then comes the very important factor, at least, in the making of a surgeon: they have no nervous system."

The great Sioux tribe of Indians, says Red Cross Notes, is withering to extinction through the inroads of tuberculosis.

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A Suggestion.

The new Glyco-Thymoline Eye Bath, which is constructed from a single piece of aluminum, has been found of exceptional service when used as a vessel to heat hypodermic solutions to the proper temperature. This little hint comes from a physician who has frequently found himself wanting just such a device. The Glycothymoline people will be glad to send you one of these cups if you desire it.—C. E. F.

Medical Education.

The time has arrived in this country when there is no longer an urgent demand for medical men. The balance of supply and demand has been struck and effort in the future must be toward advance in requirements. What is needed now is not so much quantity as quality—not more but better doctors. In the past a man's medical education was largely acquired at the expense of the people among whom he practiced and a physician's proficiency was in direct ratio with the number of years which he had practiced his profession. Now it is demanded that the would-be physician must acquire all his training and a considerable amount of experience at his own expense before he can commence actual practice.

Instead of three years in some doctor's office he is required to spend four or five years of hard study in medical following several years of undergraduate academic study and then in most cases he must acquire experience in some hospital for another three years. When he is finally allowed to practice his profession he must needs be a well trained man. The people he treats in these first few years are much better served than those treated by the young graduate of fifty years ago. After a practice of ten years the difference has largely disappeared. To both, if they are of the right sort, these years of practice were and are years of post-graduate opportunities. The way in which these are accepted makes all the difference between the good and the poor man.

The manner in which the plane of medical education is to be raised is a subject of vital importance to-day. Doctors like other classes of men are apt to be led by current opinion with little real thought for both sides of a question. Undoubtedly every medical man is in accord with the general proposition of the need of raising the requirements of medical education but we venture to say that few have thought that there is a real danger to a considerable class of our people in carrying these standards up. While the danger is not immediate careful perusal of our articles in this number will impress the thoughtful reader with the fact that this danger is none the less real.

The ordinary method of grading men on the result of written examinations is far from satisfactory and with improved courses of medical study this method should be reduced to a minimum and replaced as far as possible by a system based on a close watch of a man's daily work. All teachers have been met with the proposition of a student who is proficient in all practical work and apparently has a comprehensive grasp of the subject yet is utterly unable to put his thoughts in writing. This man may be much better qualified to practice medi-

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FOR FURTHER INFORMATION ADDRESS, W. D. WITHERBEE, M. D.

cine than some other student who can easily express all he knows on paper, yet the first one may very likely miserably fail in his final examinations while the other passes with honor. Of course this is somewhat a question of preliminary education but not wholly by any means. There is far too much of the chance element in examinations, written or oral.

This evil of the examination system is particularly evident and especially difficult of solution in the system of state board requirements. That the four years work of a student must be staked in the replies to six or seven questions on a subject is obviously leaving much to the element of chance. It is easy to point out the faults in a system but usually much more difficult to suggest a practical remedy. From the latter task we beg to shy.

A medical education should have for its specific objects, first the preparation of a man to be a teacher among his clientele of the principles of hygienic living, i. e., the prevention of disease, and second, the fitting of the man to successfully treat the sick. We purposely put these two objects in the above order for we believe that the time has come when the physician, particularly the country practitioner, must be considered responsible in a certain measure for the cases of preventable disease which prevail in his community. If this is so, the medical college can have no more important function than instruction in the ways of preventing these diseases. The progressive medical school should appreciate this demand and be prepared to meet it. When medical courses have accomplished these results their responsibilities are ended. Any further training, either preliminary or postgraduate which adds to the general culture of the man, is of great value to him in broadening his views, and probably in the long run in adding to his income, and certainly increasing his general usefulness in the community, but such training should not be ranked with the essential objects of medical education. While we firmly believe that the education necessary to an academic degree is extremely desirable and in most cases worth to the individual physician the time and effort necessary to acquire it, we do not believe that the greatest good to the largest number is to be obtained by making these qualifications a requisite for entrance to a medical college.—Vermont Medical Monthly.

The Opium-Bromine Treatment of Epilepsy.

Kellner (Medical Press and Circular) says that amongst all the drugs made use of, bromide plays the leading part. In almost every case the frequency and violence of the symptoms can be diminished by the systematic use of the medicine in doses not too small. But the hope of bringing about complete cessation is not fulfilled, and he has never seen an interval of more than a year between attacks in a single case. He then made a trial of the combined opium and bromine treatment, and has become convinced that in this we possess the most reliable means of treating this illness.

He has employed this form of treatment for the last ten years, and in the following manner: The patient for fifty days gets a dose of ext. opii three times a day, beginning with 0.05 grm. Every second day the dose is increased 0.01 grm., so that at the end of the fifty days the largest dose has reached 0.29 grm. three times a day. The dose given on the fifty-first day is 0.3 grm.; it is given once, and with that the opium treatment ends, and immediately on this the bromide treatment begins. At midday and evening of the same day a dose of 2 grm. of mixed bromides is given, the mixture consisting of pot. brom. 1 part, sod. brom. 1 part, and ammon. brom. ½ part. On the fifty-second and fifty-third days 6 grm. of the mixture are given; on the fifty-fourth and fifty-fifth, 7; on the fifty-sixth and fifty-seventh, 8. From the fifty-eighth day 9 grm. are given, and continued a long time. The medicine is always given in a glass of fresh Seltzer water.

During the opium treatment the patient gets a tablespoonful of a 1 per cent. hydrochloric acid solution three times a day, but it is observable that this is not necessary, as constipation never follows the use of large doses of opium. Bismuth takes the place of the hydrochloric acid if desirable. Naturally the diet must be light and free from spices, with a preponderance of vegetables. The patient must move about a good deal in the open air, and the writer has always insisted that during the period of opium treatment the patient shall be free of all work—school work or any other. A third factor in the treatment is the baths, which are given as follows: On the first day a bath at 24 deg. C. of ten minutes; on the second day one at 23 deg. C. of nine minutes; on the third day one at 22 deg. of eight minutes; and so at the eighth day a bath at 17 deg. C. and of three minutes is reached. It remains at this up to the fifteenth day, then from the sixteenth to the twenty-third a bath at 17 deg. C. is given for four minutes; from the twenty-fourth to the thirty-first one of 17 deg. C. and five minutes, from the thirty-second to the fiftieth a bath at 17 deg. C. for six minutes.

This treatment is not followed out in weak patients or those whose minds have

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already given way. It has been limited, therefore, to those who have retained some mental power or to epileptics who were otherwise in fair health, and the dose stated is reckoned for a full-grown healthy man and not for a child.

The results are as follows: Excluding five still under treatment, eighty have undergone the course. In sixteen (20 per cent.) of these the treatment had to be interrupted, as the opium could not be borne. In six (7.5 per cent.) the treatment failed; a diminution in frequency and severity of attacks was noted in 23 (29 per cent.). A considerable improvement in that the attacks return only at intervals of several months or their place was taken by attacks of giddiness, thirteen cases (10 per cent.). In twenty-two cases (27.5 per cent.) the patients have remained completely free since the treatment, in one case eight months after completion of the course; the others have been free for from two to six years. For success in this treatment it is very important that the patient should lead a very quiet life, free from all excesses both during and after treatment. When epilepsy comes on first later in life the prognosis is bad. Those cases that have remained free from the disease have all been between 15 and 30 years of age.

Plague.

Simpson (Lancet) in his second Croonian lecture, discusses the pandemic of plague prevailing at present, especially in India, and states that the prevention of plague is the most important question for India and England at the present time. It is now accepted that the importation of plague into a healthy locality can be effected by an infected human being, or an infected rat, or infected clothes. Infected grain may also be an agent in the importation of the disease. Once imported, the dissemination of the disease is effected by similar agents as those bringing about importation. Except in pneumonic cases rats are the principal agents in the dissemination of the disease, though personal contact, as in typhoid fever, plays a part. The writer accepts Simond's theory that the flea on the rat, leaving the rat dead from plague, and then biting man, transfers plague from the rat to the man. But the flea theory accounts for only a certain percentage of the fatal bubonic cases. It has been proved beyond dispute that the plague bacilli taken in contaminated food multiply while the food is in the intestines, enter through the lymph channels or lacteals of the intestines and invade the blood in swarms. The only qualification is that the microbes shall be

so protected as not to be affected by the gastric juice.

Pubiotomy in Private Practice.—Sigwart (Zent. f. Gyn.) advocates the use of pubiotomy in suitable cases in private as well as hospital practice. Symphyseotomy was an operation that was necessarily confined to hospital practice, owing to the need of assistants and the necessity for absolute asepsis in the surroundings. Pubiotomy by the subcutaneous method need involve no danger of infection. It may be done in the dwellings of the poor, with the assistance of students, or even of the laity, provided the operator can obtain sufficient light and room, and a firm table, on both sides of which the operator can pass. Few instruments and dressings are needed; hemorrhage is very moderate, and occurs in the form of a small hematoma contained within the tissues. The author has done pubiotomy five times in the patient's own house, and all the patients have recovered perfectly, with a firm gait and no disabilities. All the children have been delivered alive. All the instruments that he needed were a pubiotomy needle and some ordinary needles armed with sterilized catgut and sterilized gauze for tampons. It is well to have two flat specula to protect the vagina during artificial delivery of the child. The author describes his five cases. Labor was normal and without much pain. There were no lesions of the vagina during delivery. The only complication was a small abscess from a subcutaneous hematoma. The labor can be shortened by performing pubiotomy as soon as the head is fixed by the contractions. In multiparæ with well-stretched genitals a not too rapid forceps operation may be done without any damage to the parts. The extraction can be done without stopping the anesthesia, which is a great advantage in a private house. The after-treatment is very simple: a piece of gauze and some cotton, and a bit of plaster over the puncture, a towel about the pelvis, and for one week a catheter retained in the urethra include all that it necessary. At the end of three weeks the patient may get up. Forty patients operated on in this way in the clinic have all been cured. Lesions of the bladder have been few and of little importance. The same may be said of hematomata. If the section is made near the median line the pelvis separates easily and not too far. When it is too far out results are not so good. Any experienced physician accustomed to handle instruments and obsetric operations may successfully accomplish pubiotomy in a private house.

Gigli's Operation in Private Practice.—Ballenghien (Jour. des Sci. Med. de Lille) gives his reasons for believing that the lateral section of the pubes, an operation that is not severe, and is easy to do, necessitating only a small number of instruments, should be made use of in pelvic contractions of slight degree. This operation can be done in the home of the patient without fear of infection. In many cases it is necessary that the child should be delivered at term; otherwise it will not live. In the home of the workingman the bringing up of the premature baby is impossible. Hence premature delivery should be discarded. Such operations as the Cesarean section can be done only in the hospital. The mortality of the operation of pubiotomy for the mother is practically *nil*, and the children all live. Tearing of the vagina and bladder are rare. Hematomata are unimportant, and infection seldom occurs, while the puerperal state is quite normal. A permanent osseous union may be obtained by a firm band and rest in bed for four weeks. The author thinks that it is much better to keep the patient quiet longer and have osseous union than to get only fibrous union. The author records two successful cases done in the homes of the poor. He sees no advantage in using the subcutaneous method. The incision should be sufficiently oblique from above downward to pass outside the subpubic tubercle. If the section passes too near the spine of the pubes it is in danger of lacerating the external fibers of the inguinal ring. When too near the symphysis it endangers the bladder and the corpus cavernosum of the clitoris. Hernia is rare.

Treatment of Hysteria.—Savill (Lancet) concludes that hysteria consists of an instability or undue irritability of all the nervous and reflex centers throughout the body, and particularly those of the vasomotor and sympathetic systems. Hysterical paralysis or tremor and many other hysterical phenomena are produced by vascular change in the nervous system and elsewhere. The essential defect in the nervous system upon which the hysteria depends is inborn and inherent—that is to say, the reflex centers in hysterical subjects are throughout life more unstable than those of other people.

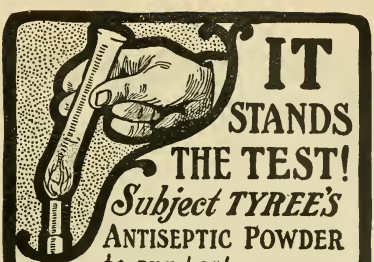
The general measures directed to the improvement of the nervous irritability may consist of rest, isolation from home surroundings, food, massage, electricity, hydrotherapy, and psychotherapy or hypnotism. Of all the various measures, rest is of the greatest value in allaying irritability of the nervous system. All sources of peripheral irritation must be removed. Complete rest of the body can be obtained only in bed. Abundance of sleep is essential, and it is

sometimes justifiable to administer hypnotics. Removal from the conditions under which the disease arose is almost as indispensable as rest. It is often necessary not only to remove the patients from home, but to forbid any letters to be written or received.

As much easily assimilable food as the patient can take improves the nutrition of the nervous system and of the body generally. To increase the power of assimilation, such increase in the amount of food should be associated with massage. Massage also soothes the nervous system. As a rule, no drugs should be given, except an occasional aperient or dose of bromide for sleeplessness. Electricity is of considerable use, especially in those cases where a rigid rest-cure cannot be given. Static electricity is more useful than the galvanic and faradic forms. Hydrotherapy acts powerfully on the neurovascular system. Under psychotherapy may be included all kinds of persuasion, suggestion (auto-suggestion), and hypnotism. The object is to cultivate the will and control of the patient over her unruly emotions and unstable reflex centers. Ammonium bromide is the writer's sheet anchor for allaying the irritability of the reflex centers.

Apomorphine is the best remedy for the prompt cure of severe hysterical convulsions. The writer has also had a certain amount of success with vaso-constrictors (ergot), vaso-dilators (pilocarpine), and remedies acting on the blood (calcium salts) in cases where there is noticeable irregularity in the vaso-motor regulator mechanism. Educational and other prophylactic measures are of great value.

Referred Pain.—Forsyth (British Medical Journal) says that it is difficult to classify pain, but the writer states that the following distinctions may be made: There are the pains of inflammation, of pressure, and of stretching—the two latter probably the same. Then there is neuralgic pain—pain with no organic lesion—and subjective pain, where the mind itself is at fault. Lastly, there is referred or sympathetic pain—by this is meant that variety of pain which is located to one healthy part of the body as a result of disease in another. It may be the only pain produced by the disease, or it may co-exist with a greater or less degree of local pain set up in the affected viscus. Allocheiria is that uncommon condition where the patient refers stimuli applied to one part of his body to a corresponding position on the opposite side. True neuralgia depends on no nerve-lesion, neither is it referred from any remote condition. It is entirely distinct from referred pain, and yet the diagnosis is often extremely difficult.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The points to be relied on are the area of distribution and the presence or absence of superficial tenderness. Referred pain is associated with hyperalgesia; with neuralgia this is unusual. Referred pain (and its superficial tenderness) is limited by boundaries set in the central nervous system; the distribution in neuralgia corresponds to some peripheral nerve.

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Concerning Persistent Priapism.—Terrier and Dujarier (Revue de Chirurgie) report a case of persistent priapism which came under their observation at La Pitie during May, 1906. They give a review of the literature, collecting 48 cases, including their own. Of these 48 cases, thirty-one recovered spontaneously. Five died of leukemia. Two died with the priapism unrelieved, one of suppurative phlebitis, one of a fractured spine. Operation was done in ten cases, all cured. In the case reported, syphilis and gonorrhœa were absent. Three years previous the patient, 30 years of age, an acrobat, fell 50 feet and received a "complicated" fracture of the left thigh requiring amputation. No spinal symptom. Patient entered hospital May 19th, 1906. On the night of May 14th, patient had intercourse six times. After this nothing abnormal until May 17th when patient awoke at 3 o'clock in the morning with an erection. This was persistent, but not painful, until ten o'clock. No urethral discharge, but persistent and painful erection. At 5 p. m., patient came to hospital. On examination the erection appeared to be restricted to the corpora cavernosa, the corpus spongiosum being flaccid. Palpation showed fluctuation with great tension in both corpora cavernosa. Testicles and scrotum normal. Some spasm of sphincter ani, vesicles and prostate normal. The erection persisted both day and night and the pain required morphine injections for relief. No evidence of a lesion of central nervous system. No leukemia. On the 21st temperature reached 100 F. A general bath afforded no relief. On the 24th it was necessary to catheterize the patient. On the 26th the tumefaction was greatest in the right corpus, and the penis inclined to the left. The retention, however, ceased and the patient noticed some pus at the meatus. The urethritis was probably due to the use of the catheter. It was not specific on the 27th; the pain was less severe and the penis had diminished in volume. The pain and swelling returned the following day and June 1st M. Terrier operated. An incision was made into the side of the right corpus, 2 cm. in length, which gave vent to thick blood of the color of treacle, viscid, but without any clots. By squeezing both corpora cavernosa, they were emptied of a great quantity of dark viscid blood. A second incision was made in left corpus, with similar results. The penis now became flaccid. The corpora cavernosa were sutured with catgut; the skin with horse hair. Cultures taken from the expressed blood showed colon bacilli subsequently. Some wound infection followed and the wounds were drained. The patient left the hospital July 2nd, but returned on the 12th with a swelling at the base of the penis. A sound introduced into the sinus, which remained, was followed on its withdrawal by a large quantity of pus, the cavity extending to the root of the right corpus.

Patient left hospital, the second time, the 19th of August. At this time there had been a few erections, but no ejaculations.

The authors state that the causes of persistent priapism may be classified as follows: nervous, traumatic, inflammatory, leukemic and idiopathic. Two of the 48 cases cited belonged to the first type, one occurring in a patient with paraplegia from fracture of cervical spine, and one in a patient with "cerebro-medullary" syphilis. The authors remark, however, that the fact that persistent priapism does not yield to chloroform is a sufficient proof that, as a rule, the nervous origin of the disease cannot be accepted. In two cases of the series, priapism followed injury to the perineum, one from a fall, the other from a kick. Hæmatoma of the corpus cavernosa was found compressing the urethra.

With one exception the priapism, which is the result of specific infections, is transient.

The authors make a distinction between "penitis," "cavernitis," and persistent priapism.

Leukemia in sixteen out of the 48 cases was found to be the cause of the priapism.

Of unknown (idiopathic) origin were twenty of the 48 cases.

All those writers who have opened the corpora cavernosa in patients with priapism have failed to find thrombosis, but have observed that the cavernosa tissues were distended with thick syrupy blood rarely mingled with little clots.

The authors state that these cases of persistent priapism, as a rule, recover, but that their recovery is more prompt and complete, particularly as to function, when operated than when allowed to recover spontaneously, an affair which is a matter of weeks and months.

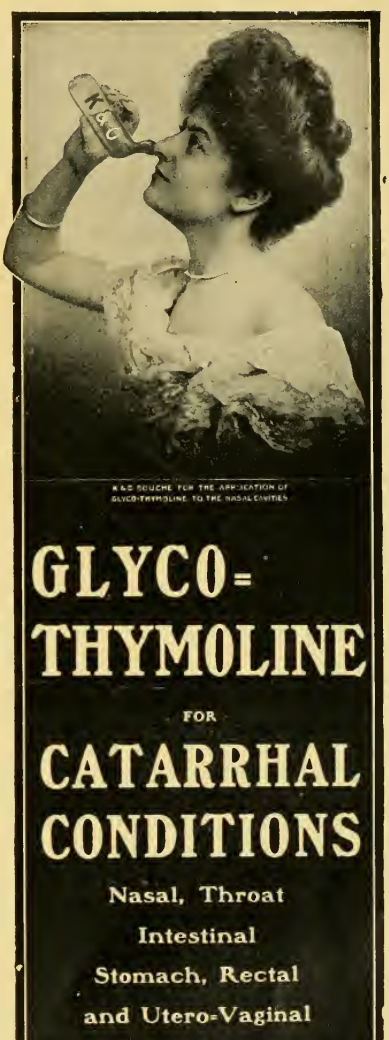
Thoracic Aneurism.—Oliver (British Medical Journal) says in regard to the treatment of thoracic aneurism that rest in bed and quietude are essential, accompanied by a restricted diet. Cases of thoracic aneurism unaccompanied by aortic incompetence are more amenable to treatment than those arising just above the aortic orifice and accompanied by aortic regurgitation, for in these there cannot be that calmness in the interior of the sac which is necessary for coagulation of the blood. The administration of iodide of potassium gives on the whole the best results. Pain and paroxysmal dyspnea

are frequently relieved by it. The author has administered to some of his patients as much as 450 grains of potassium iodide per diem, but there is nothing to be gained by giving such large doses. In some instances the results will not be so satisfactory, for when pushed beyond a certain limit potassium iodide lowers the blood-pressure and so quickens the action of the heart that the circulation in the aneurism is too excited for the deposition of clot to occur. Since calcium salts are known to favor coagulation of the blood he has administered these in various forms, but without obtaining results as satisfactory as those from potassium iodide alone. Even with this potassium salt there are few real cures of thoracic aneurism, although great relief is obtained. While in distal aneurisms spontaneous clotting of blood may occur that leads to cure, this, owing to the situation, is very seldom the case in thoracic aneurisms.

The author has had no experience in carrying silver wire into the interior of an aneurism, nor of needling. Several cases of aneurism he has treated by the subcutaneous injection of gelatin into the tissues in the neighborhood of the sac. Some of the patients complained of great pain in the part afterward, while in others there was always a slight rise of temperature and considerable discomfort. In a few of the patients thus treated the pulsations of the aneurism became less marked and the tumor became harder and shrunk. Several of the patients left the infirmary much better, but the cure was never complete, for in some of them the sac ruptured weeks or months afterward. Apart from the pain which the subcutaneous injection of gelatin causes there is another risk that has to be borne in mind. Tetanus followed gelatin injections in one of the London hospitals, and as it is extremely difficult to sterilize gelatin, this risk, although no doubt remote, must be borne in mind.

The author has had a limited experience with galvanopuncture; he has seen one case of subclavian aneurism thus treated, and in which for several months the result was satisfactory until, after friction caused by the workman carrying his spade on the affected shoulder, the aneurism redeveloped and burst into the surrounding tissues, causing a hematoma which began to ooze through the skin, but in which the blood subsequently coagulated, and the aneurism was finally removed.

One of the difficulties of treating thoracic aneurism is in getting the subjects of the disease to be patient under treatment. Rest in bed and the restricted diet in time become irksome to the patients, who, once they feel rather better, long for freedom. If when the



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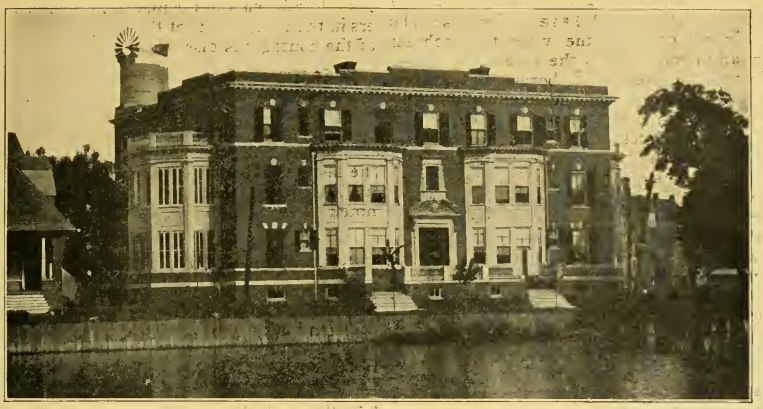
pulsation of the tumor has lessened and the sac has become smaller and harder, patients can be got still to carry out the rest cure, the results are, as might be expected, more satisfactory.

Rupture of the Uterus.—Munro-Kerr (Brit. Med. Jour.) reports a case of complete rupture of the uterus, occurring in a ricketty woman during labor. The fœtus escaped into the peritoneal cavity. Panhysterectomy was performed and the patient made a good recovery. In many cases of this kind, the rupture of the uterus is not recognized until after the birth of the child, many of the classical symptoms being absent. The sudden feeling of something having given way is present in but very few cases, and only where the laceration is extensive and the fœtus has escaped into the abdominal cavity or the cellular tissue under the peritonæum. Alterations in the shape of the abdominal swelling can also only occur where the child passes wholly or in part out of the uterus, when two abdominal swellings become apparent. A bipartite uterus may simulate this condition. The fœtal parts are much more easily palpated after the child has passed into the abdominal cavity, than when it is still in the uterus. The amount of hæmorrhage which occurs as a result of rupture of the uterus varies greatly. In only three of the author's thirteen cases was it severe. But there may be but little bleeding from the vagina, much of the blood escaping into the peritoneal cavity. But as a rule the bleeding is very gradual, the child's body acting as a plug. After the fœtus is extracted the hæmorrhage may become much more profuse. The situation of the tear as regards the uterine blood vessels is of great importance. The pulse rate gradually rises, and uneasiness, eralgen abdominal pain, and the ordinary symptoms of collapse become more pronounced. The diagnosis between complete and incomplete rupture can be arrived at only by vaginal examination. When the rupture is complete the intestines can be distinctly felt; this is not possible where it is incomplete. Of fourteen cases seen by the writer, three were incomplete and all recovered; two of the complete cases were operated on and both died. Of the remaining nine cases in which hysterectomy was done, six died. Plugging is the safest treatment for the practitioner, providing collapse is not extreme.



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The Influence of School Life on the Spread of Scarlet Fever.—Goldsmith (Lancet) holds to the view that schools greatly contribute to the spread of scarlet fever. He presents elaborate tables and a chart showing local conditions in reference to his main contentions. His study embraces 19,219 cases. In taking up the question of school influence, we may ascertain the day of the week on which the onset of each case occurs. By this method one can see on which day most cases arise, and further, whether Saturday and Sunday, days of non-attendance at school, produce any influence in lessening the number of cases on certain days following, allowance being made for incubation. Again comparison can be made between the holidays and the school terms in relation to the days of onset. It is of importance also to ascertain if, as regards the day of the week, the onset in infants and adults corresponds or not with the results obtained in school children. A second method of approaching the subject consists in ascertaining the total number of cases occurring among children of school age during the holiday and comparing this with the number of cases occurring during an equal period of time before and after the holiday. Further, the effects of the holidays on infants and adults must be compared with that in children of school age. One might expect infants to show only a slight diminished incidence during the holidays. In adults also a fall may be expected, proportionately greater, however, than in infants, owing to the diminished number of cases among school children during the holidays. This fact, of course, would tend to lessen the number of cases in infants also, but the greater amount of contact during the holidays between infants and those members of the family who are of school age will in all probability counterbalance the diminished prevalence of scarlet fever among the latter. In adults the amount of contact is not increased, as they are at work all day and are exposed to infection from school children mainly in the evening whether the schools are open are not; this observation refers chiefly to male adults, but it is applicable in a less degree perhaps to females also, many of whom are employed in mills, shops, etc. The author's cases extend over a period of nine years and his tables, while they cannot be well abstracted, are yet very suggestive to educational officers. Most striking is the sudden rise in the number of cases when the schools reopened after summer and Christmas holidays. The author simply presents his facts without suggestions as to remedying the present state of affairs, except as to hint at the systematic medical inspection of all school children and the instruction of teachers in the recognition of the early evidences of the contagious diseases.

A Diagnostic Symptom in Appendicitis.—One of the most important questions that arise in connection with the early diagnosis of appendicitis relates to the degree of participation of the peritoneal covering. During the last year and a half Blumber (Muench. med. Wochen.) believes himself to have noted a new symptom, the presence of which points to peritoneal involvement. In the typical case of early appendicitis, gentle pressure over the affected area produces pain which ceases as soon as the pressure is relaxed. When, however, instead of being gradually withdrawn, the hand that exerts the pressure is suddenly removed, the resilient tissues are thrown into more or less vibration and this in itself may produce a pain which the patient can nearly always clearly distinguish from the original pressure-pain. The writer believes that this pain, produced by the sudden removal of the palpating hand, is dependent upon the inflammatory involvement of the peritoneum. If it is more intense than the pain produced by the palpation of the appendix, the infection is probably progressing; if less intense the disease is retrogressing. The worst cases are those in which the symptom appears suddenly and with great intensity. The writer's experience is not based on a great mass of material but he requests that other clinicians give the method a trial.

"There was a time," says Conan Doyle, "when a young man who was going to do anything in the world was passed mechanically through the Bar. I believe the time will come when the similar young man will be passed through medicine, because I know no other means by which he could get to the fundamental and absolute facts of life. The mere fact that in his medical training a man has to undergo so searching an ordeal in the most critical years of his life, and pays such enormous attention to detail, is in itself evidence that he receives a splendid training. I have always said that for a man who has mastered "Gray's Anatomy" life has no future terrors. If our young army officers had five years' study in the same sense that the young medical man has five years' study, we should become the terror of Europe."

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The Medical Treatment of Gastric Ulcer.*

The progress and development of surgery made it possible that cases of gastric ulcer and its complications, which have been consdidered as fatal in former years, are amenable to surgical treatment and recovery. It is undeniable that numberless people owe their life to the skilful and timely intervention of the surgeon's knife, but, on the other hand, there is very little doubt as to the fact that many a surgical intervention, however skilfully performed, has accelerated the patient's death, who, under proper and carefully prolonged medical treatment, could have enjoyed his life and fairly good health for many years to come.

It is not very long since the operative treatment of appendicitis has been introduced, and nowadays its employment has become so universal that medical treatment of that ailment has almost gone out of fashion. I say medical treatment has gone out of fashion, as it is fashionable to recommend a patient who suffers with some symptoms of appendicitis to undergo an operation whether there be immediate necessity or not. Now in one-third of the cases the surgeon reveals that there was nothing the matter with the appendix; in another the conscientious surgeon may find the appendix in a condition that would have improved with less risk under a proper medical treatment; and finally, in the last third of the cases the surgeon will find that his intervention is really wanted.

I consider it just as grave a mistake to send a case in which medical treatment may be successfully employed under the surgeon's knife as to hesitate with the operation in a case in which medical treatment proved to be of no avail.

I look upon the operation of appendicitis as an *ultima ratio*, and am of the same opinion as far as gastric ulcer is concerned.

The operative treatment of this latter disease is also very much in vogue, and the profession resort to it much oftener than need ful. It ought to be looked upon as an *ultima ratio*, and its indications which I beg to give in the following, deserve to be well considered:—I only avail myself of the surgeon's help: If the patient's life is in danger (1) through fulminating hæmorrhage which cannot be arrested; (2) through perforation; (3) inanition caused either by the fact that the ulcerated stomach cannot retain any food, or by contractions and adhesions.

I have lately read a good many papers advocating surgical treatment in preference to medical treatment, and some of the authors even went so far as to state that medical treatment effects only in 25 per cent. of the cases a cure.

This is a very small percentage indeed, and I cannot account for it under any consideration, unless I am to suppose that the cases referred to have been a collection of unusually severe cases. For well-known clinicians, as Leube, Ewald, and Cohnheim's statistics, average between 50 and 90 per cent., but, as many of their patients comprise hospital patients who cannot always be depended upon, as, after their leaving the hospital we very rarely know how they were getting on, I beg to quote my statistics, and shall confine myself to cases of whom I hear from time to time, not taking into account such cases as I have seen once or twice in consultation.

The number of my cases is eighty-two, all of whom I have known from two to ten years. Out of the eighty-two eleven have died from the following diseases:—Six died from cancer, after having enjoyed from four to seven years fairly good health after their treatment for gastric ulcer; two have been operated upon for hæmorrhage twelve and sixteen months respectively after their treatment and died soon after the operation; one died of perforation, one of diabetes, one of apoplexy.

The remaining seventy-one are enjoying fairly good health; of course some of them have to live carefully and are in need of some treatment from time to time: but do patients on whom a gastro-enterostomy has been performed do differently? Is it the rule, or is it the exception, that robust health of a normal constitution has been restored by the operation?

If medical treatment is not always successful there are principally three reasons which account for it: (1) Late diagnosis; (2) wrong treatment, under which heading I also comprise treatment which has not been continued for a sufficiently long time; (3) carelessness and disobedience on the patient's part.

The diagnosis of gastric ulcer is not quite so easy as our text books have taught us. We have learned in school that in gastric ulcer the patient complains about violent pain in a localised spot, which occurs almost immediately after meals. The pain is localised in the right hypochondrium, and is in most cases followed by vomiting. But in what a cluster of diseases do these symptoms appear? Don't we meet them in ordinary gastralgia, nervous dyspepsia, gall stones, and nephro-lithiasis? Doesn't the primary stage of cancer show the same symptoms? But the text book points out two more very important symptoms, namely, hyperchlorhydria and hæmatemesis. As far as the first is concerned, it is a symptom on which in a great majority of cases we can depend, but it cannot be looked upon as a

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LIBERAL SAMPLE TO PHYSICIANS AND NURSES.

conditio sine qua non. According to Ewald's investigations, only in 34 per cent. of his cases was hydrochlorhydria present, whereas in 57 per cent. the acidity was normal, and in 9 per cent. the acidity was found to be sub-normal. Out of my eighty-two cases the acidity was tested in sixty-eight cases, out of which latter in sixty-three cases hyperchlorhydria was established, and in the remaining five the acidity was normal. Hæmatemesis is very often the only symptom which raises the practitioner's suspicion as to the nature of the disease, but it is of quite frequent occurrence that hæmorrhage remains unobserved and in many cases the amount of blood is very small, and in other cases vomiting does not take place and the fæces are not paid attention to.

Palpation is of but secondary importance; it very rarely reveals the seat of the ulcer, and owing to the hyperæsthesia of the patients, very often misleads the examiner.

If the textbook doesn't supply us with all the information we want, practice teaches us that a patient suffering from gastric ulcer is very rarely so emaciated and cachectic as a sufferer from cancer; he also recuperates very soon after the acute symptoms have left him, and enjoys in contrast to the latter, a very good appetite, has a clean tongue and no nasty taste in the mouth, as is usually the case in dyspepsia and cancer. The fear of food, in contrast to the loathing of food in other stomach troubles, is also very characteristic in gastric ulcer. These and several other little things must guide the practitioner in making a diagnosis, in which case diagnostic errors and ill effects from medical treatment will not be experienced.

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Treatment.—In the acute stage of the disease the patient must be confined to bed for eight or ten days. Absolute rest will best alleviate the pain and hemorrhage. For the latter I usually employ the ice bag and make the patient swallow ice. This usually stops the hemorrhage; should it prove insufficient, a hypodermic injection of 1 c. c. of a 0.1 per cent. solution of adrenalin will in most cases stop the bleeding. Instead of the ice bag, Leube and others recommend hot applications, which I prefer to use in the second stage of the treatment. Very effective is the administration of magistery of bismuth, first recommended by Matthes, and chiefly advocated by Kussmaul and Ewald. The latter recommends as large doses as 20 grammes per diem; he prescribes the drug in a watery solution to be taken in three portions. The drug is to be taken for a protracted period, and Ewald never noticed any ill effect, even if 600 or 800 grammes have been consumed. Matthes' object in administering the bismuth is that the latter forms a coating around the stomach wall and protects it from further injury.

With the same object Cohnheim prescribes his oil treatment, but the oil is not so well tolerated as the bismuth, although its action on the hyperchlorhydria is undoubtedly beneficial, and has, if anything, a high nutritive value.

I remove the ice bag on the third or fourth day and replace it by cold compresses which are changed every hour. On the same day, the patient, who has hiherto been fed by the rectum, gets small quantities of milk (preferably cold, boiled milk the first few days). Or, if the latter is not tolerated, bouillon. The amount of milk or bouillon must not exceed two pints per diem in the first three days of alimentation per os, and all we can add is a raw egg or two, which must be well beaten up in the milk or bouillon, and is mostly well tolerated by the patient.

At the end of the first week the patient is put on a mild Carlsbad treatment, as first prescribed by Leube. The latter gives his patients a tumblerful of lukewarm Carlsbad water, which decreases the acidity of the stomach and also acts as a mild aperient. I prefer to administer the Carlsbad water fairly hot—about 140 degrees F.—and give the patient three wineglassfuls in the course of two hours. Now the quantity of milk may be increased, and porridge and soft-boiled eggs may be added. As a rule, on the tenth or twelfth day the patient is quite relieved of pain and feels fit to leave his bed. As soon as this stage is reached increase the amount of Carlsbad water to three tumblerfuls a day, and in cases of constipation add a teaspoonful of Carlsbad Sprudel salts to the first tumbler. This goes on from four to five weeks, and in the three weeks of treatment I replace the compresses by a termophore, to be employed during the night Dietary concessions must also be made as the patient will now possess a good appetite and require some solid food. This, however, must be done very carefully, as many a relapse has been caused by an over-generous diet. I wish to emphasize this fact, as latterly a certain part of the profession in Germany is rather in favor of a generous diet even immediately after the hemorrhage, intending thereby to increase the patient's power of resistance. How risky this theory is is needless to explain, and my general rule is to keep the patient on milk, porridge, rice pudding, fish, fowl, or greens, for at least two months, and even afterwards to advise him to abstain from beef, pork, game, pastry, and bread. This latter in any shape, is very badly tolerated and should be replaced by gluten biscuits.

S. A. ARANY, M. D. Reprinted from "The Medical Press," London.*

"Independence" In Medical Journalism.

The West Virginia Medical Journal for June, in an article entitled "Independent" Journalism, takes as its text a commendatory notice of itself in the St. Louis Medical Review for February 9th. In this article the Journal takes exception to the usual use of the term "independent," viz., as distinguishing privately owned journals from the official organs of professional bodies, and it argues that "the conditions necessary to constitute independence in medical journalism are much more likely to be found when the journals are conducted by State or society organizations that have no connection with business enterprises, or have no dependence for their continuance on the financial support derived from subscriptions and advertising patronage."

We may point out en passant that the State journal is practically as much dependent "on subscriptions" as the so-called independent journal. If this is doubted, let the said State journal editors adopt a policy which will be displeasing to their clientele, the State organization, and watch the result. Moreover, as few of them have any circulation to speak of outside of the organization that maintains them, if the members of that organization—upon which it is conceded they depend for their maintenance—are not "subscribers," we would suggest that thsy call the attention of the postal authorities to the fact and see what will happen. It is not true, therefore, to

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Prepared only by

Charles Marchand

Chemist and Graduate of the "Ecole Centrale des Arts et Manufactures de Paris" (France)

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say that they are not dependent on their subscribers. They are just as much so, if not rather more, than any other kind of journal, and their circulation usually evidences the fact in a somewhat backhanded manner.

But our purpose was not to deal with details but to examine general principles. And right at the beginning we join issue with our contemporary as to what constitutes "independence" in journalism. Our contemporary appears to assume that nothing can display independence of spirit that has to look to others for sustenance. This idea is contradicted every day when we find true independence often displayed by those dependent on others for subsistence, and servility ad nauseam on the part of others who could well afford to have the courage of their convictions on any subject whatever. As a matter of fact, this question of the source of finances—whether from subscriptions or advertising—is only a very small factor in the question of that control likely to prove detrimental to true independence, which is not a simple question relating to advertising matter, but covers a much wider field.

To be truely independent, a journal must, in our opinion, refuse to be limited by orthodoxy. It must accord to heresy a right of free expression, so long as the evidence

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adduced is not a mere repetition of already disproved allegations or confuted arguments, the language is temperate, and the writer shows acquaintance with the subject as a whole, an appreciation of the position attacked as it is seen from the orthodox viewpoint, and not merely in the distorted vision of an "anti." Nay more, it must be prepared to follow "heresy" and become a "heretic" if convinced.

It must also repudiate the cardinal idea once forcibly expressed in a controversy that we well remember, in the words, "on this subject the profession has long since spoken definitively." The profession cannot speak definitively on any subject at any time. It may think it has done so, but its own history and that of all science amply demonstrates that there can be no such thing as definitiveness in the empirical (or inductive) sciences, since their rulings must always be subject to reversal by new findings until the human race shall have attained to infinite intelligence.

These two factors are as important as, if not more important than, the freedom from a commercial bias in regard to a small section of the subjects dealt with by professional journals, viz., that of materia medica, of which alone our contemporary appears to take note.

Now, with regard to the first two of these points, we have no hesitation in asserting that from the very nature of things the organization journal must find it very much harder to be truly independent, than does any privately owned journal—with all its alleged "subsidizing" by proprietary medicine makers—in regard to the materia medica. Indeed, on the first of them, it has absolutely no right to be independent, for it is the organ of the majority, pledged to their views, a bounden partisan of their orthodoxy. And even if it had a right. it is quite certain that should it commit itself to what is generally held to be heresy, the majority of its constituents would compel its editor either to recant—no matter what his inner convictions might be—or to resign in favor of some one more orthodox. Yet the merest glimpse at the history of science, and particularly of medicine, will abundantly demonstrate that many of the most violently opposed heresies of the past, opposed even to the point of bitter persecution, are to-day among the most orthodox of views. We need only instance Semmelweis and the doctrine of puerperal fever. Had Semmelweis been the editor of an organization journal how long would he have held office? Where is the independence in that? How many editors of organization journals would dare, though their convictions led them that way, to challenge the mosquito theory of malaria and yellow fever, to repudiate the propriety of compulsory vaccination, even to deny the usefulness of vaccination or diphtheria antitoxin? And if they did, how long would any of them remain editors? We believe in all these things, it is true; but if we did not, if evidence appeared to us forthcoming cogent enough to make us see that in these instances (as in many others besides that of the nature of puerperal fever on account of which the profession hounded Semmelweis to his death and later erected a monument to him in recognition of his discovery) the "definitive" decree of the profession was wrong, we should not hesitate to say so and no one could depose us from our chair. The worst that could happen to the independent journal under such circumstances would be that individual subscribers, few or many, who felt sufficiently aggrieved, should withdraw their subscriptions. Not so with the organization journal. Its editor would have put every member of his organization who did not agree with him, as well as the organization as a whole, in a false position, as appearing to espouse a doctrine considered by them, invididually and collectively, false.

The history of Semmelweis, and innumerable other instances, only go to show that it would be the blackest of days for medicine should the journal independent of orthodox absolute control ever be blotted out.

As to the minor portion of the case, that to which our contemporary refers as though it constituted the entire question of independence—the danger of the "subsidizing" influence of the advertisers in commercial directions—it cannot be desired, but it is not inevitable. So far as the Review is concerned, it has laid down its own standard, and done its best to adhere to it. It has refused to submit to any dictation from advertisers more than once. It has declined to accept advertisements that do not fulfil its requirements, however imperfect they be, or that make a condition of the publication of so-called "reading notices" in its editorial columns, which would thus assume the character of editorial endorsement of the preparation.

Finally, we will venture on a little tu quoque. Elsewhere in the same issue, our contemporary says:

"We would like to see so excellent a journal as our St. Louis contemporary keep step in the march of progress toward a truly scientific therapeusis, and cease encouraging its readers to prescribe unknown remedies by setting before them advertisements of proprietaries of secret composition."

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Without stopping to inquire to what particular advertisements it refers, we would point out that this same issue of the West Virginia Medical Journal displays the advertisements of two preparations—which we also carry, and from our standpoint have no fault to find with them—which have been specifically excluded from the Council of Pharmacy's blue book of the advertising elite, one of which, moreover, was the subject of specific condemnation by that Council in the J. A. M. A., in February, 1907, and both of which were pilloried as "horrible examples," we believe, in the association's exhibit at Atlantic City. Is this "keeping step in the march of progress toward a truly scientific therapeusis" according to our contemporary's (not our) standard and acceptation of the term?—St. Louis Med. Rev.

The Chemical Analysis And Physiologic Experiments on "Meatox"

The results of the investigations on Meatox carried out by I. V. S. Stanislous, B. Sc., Pharm. D., Dean of the Medico-chirugical College of Philadelphia are interesting as well as of great value to physicians. We herewith quote from his article which appeared in the Medical Bulletin of Sept.

Philadelphia, Pa., March 28, 1907.

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Submitting the inclosed analysis I take pleasure in stating that basing it on the protein content this is the most wonderful exponent of the modern nutrients extant. It is practically five times the meat value as a food, and as such will command the attention of every physiologist and hygienist interested in food products.

Philadelphia, June 29, 1907.

Physiological Experiment on Meatox.

Meatox is a pale yellow granular powder, having the odor and taste of celery, with which it is flavored.

Its composition, according to my analysis of March 28, 1907, is as follows: 73.54 per cent. of proteids, 4.5 per cent. of salts, and 12 per cent. of fats.

It does not dissolve in cold water, but imparts to the water an opaque color. When applied in a solution to the frog's heart it increases the rapidity of the beat for a short time, then makes the beat stronger as is actually shown by tracings from the heart itself.

The effect on blood-pressure in the human subject was noted. A man was fed on Meatox, bread and butter, water, a little hot tea, without milk, and fruits and berries with a little sugar for 10 days. Blood-pressure was extimated with a Rivi-Rocci sphygmomanometer, the systolic pressure being only recorded. Before starting on the Meatox diet, the radial systolic pressure was 115 m. m. of mercury, while at the close of the diet the radial systolic pressure was 118 m. m. of mercury.

The blood-pressure on a rabbit was taken and confirmed the rise of pressure. The rabbit was carefully etherized and a cannula placed in the left carotid artery which was attached to a Ludwig's mercury manometer, and records of the various changes in the pressure were noted on a smoked drum of a Ludwig's kymograph.

One decigram of Meatox was macerated thoroughly with about 1 drachm of warm water and then filtered through glass wool; a few drops of warm water was added to wash out that which might remain in the filter and to make up the desired quantity.

The solution of filtered Meatox was injected into the right external jugular vein, and a series of tracings recording the frequency of the heart-beat and the rise of blood-pressure at 15 minute intervals positively demonstrates the effect of Meatox on the circulatory system. The effect of Meatox wes tried on intestinal peristalsis. The effect was studied after the method of Professor Magnus, of Heidelberg. A piece of the small intestines of about 10 centimeters in length was taken from a rabbit. This was placed vertically in a glass containing about 225 cubic centimeters of a modified Ringer fluid kept to the temperature of 37.5° C. One end of the intestine was attached to an L-shaped glass rod by means of an S-shaped pin hook, and the other end to a Porter's heart lever slightly weighted.

Oxygen was allowed to pass through the solution all the time. Before the Meatox was added contractions were recorded, to get about as near normal contractions as possible. About 2 decigrams of Meatox were then added, and it was noted that the tonus of the contractions increased but the frequency remained about the same. When larger doses of Meatox were added to the intestine the frequency became a little slower, but the tonus and force of contractions increased quite markedly.

The effect on voluntary muscles was studied by soaking the gastrocnemius muscle of a frog in a watery solution of Meatox. The muscles were allowed to soak in this for various lengths of time, ten or fifteen minutes being the usual periods.

The recording of the effect of a maximal break electric shock was noted on a smoked drum by means of a Porter's muscle lever and moist chamber. The muscles contracted very rapidly. Both the systole and diastole were very rapid, and when a strong tetanizing current was added it was noticed that the contractions became stronger after the current was on for a few seconds. Return to the normal was gradual. From this it appears to assist in muscular contraction.

The above deductions convince that Meatox as a concentrated food is an easily digested, assimilated, and sustaining condiment.

Remember that the dripping of the urine in adult life usually denotes the over-flow of a distended bladder, possibly occasioned by muscular relaxation of bladder or the commencement of hypertrophy of the pro-

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The older masters of venereology were very particular to keep their gonorrheal patients on demulcent drinks and a low diet, and accomplished much good by this course. The soothing demulcent effect of Sanmetto renders it an ideal remedy in gonorrhea.

Some of the indications for Sanmetto are: Vesical irritation and atony; enuresis due to atony; incontinence of urine in children due to a weak bladder; dribbling of the urine in the aged, not due to paralysis or growths; urine expelled upon exertion, as coughing; cystitis; catarrhal discharges from bladder or genitalia of male or female; seminal emissions; prostatitis, enlarged prostate and pre-senility.

The Bier Treatment in Gynecology and Obstetrics—Runge, Berlin klinische Wochchrift, finds that in gynecology this form of treatment is best suited for inflammatory conditions of the cervix and for those of the endometrium of the uterine body, i. e. in all forms of endometritis. To treat cervix conditions he inserts a glass speculum into the vagina, the one end fitting snugly over the cervix, the other being attached to a suction apparatus. While this method is also used by many in endometritis, he claims it is practically useless, as the suction causes the two walls of the uterus to come in close contact with each other, so that there is no uterine cavity which can communicate with the suction apparatus. In order to treat these cases properly he first inserts a dilator into the uterus; this consists of a glass rod surrounded by a wire netting which fits closely to the rod while the latter is being inserted. After the dilator is in the uterus a screw at the end of the rod is turned, which in turn raises the wire netting from the rod and thus keeps the uterine walls separated and the cavity in communication with the suction apparatus. His results in these conditons with the Bier treatment were good, but no better than those obtained with other methods, while it took longer to attain the same results. He warns against keeping the suction up too long and against pulling on the apparatus when it is in place, as shock and uterine displacements have been caused by not heeding these warnings. The suction is usually kept up five minutes, at five-minute intervals, one sitting lasting from one-half to three-quarters of an hour and is repeated every two or three days. He has not had enough experience with metritis, parametritis, and amenorrhea cases to report on the value of this treatment in these conditions. In obstetrics he has tried it in septic endometritis and subinvolution cases with some good results. In mastitis it prevents suppuration when applied early, its main use, however, he finds in cases of suppurative mastitis, where the suction apparatus is applied for ten minutes at a time, at ten-minute intervals, for three-quarters of an hour twice a day, but only after one or two small incisions have been made. It certainly has the advantage over the more radical surgical procedure in that it does not leave large scars, destroys less breast tissue, cures more rapidly, and thus permits the child to put back to the breast sooner, while it keeps up the secretion of milk by its suction even though the child does not nurse.

Bier's Hyperacmia in Otology.—Leutert Deutsche medizinische Wochenchrift, reviews most of the articles published by others on the value of the Bier treatment in otology. He does not share the opinion of those who claim it has already been proven useless in this branch of medicine, but is inclined to believe that it deserves further trial in a certain class of cases in which good results have been obtained. He furthermore holds that this form of treatment should be confined to ear clinics where the patient can be constantly watched and immediately operated upon if necessary. The deductions which he draws are as follows: (1) In chronic middle ear disease the treatment is useless. (2) In mild, fresh cases of otitis media paracentesis relieves the patient much quicker than the hyperaemia artificially produced. (3) Fresh, severe cases of otitis media, with or without mastoid tenderness, in which an early paracentesis was necessary and in which the Bier treatment was instituted at the same time, are not cases by which we should judge the efficiency of the latter form of treatment, since the good results were probably due to the paracentesis. Many of the reported cases of cure with the Bier treatment are of this kind. (4) In mastoid disease the treatment is dangerous on account of the close proximity of the sigmoid sinus. Bier claims that

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artificial passive hyperemia increases the area of inflammation, which increase amounts to possibly one centimeter in an extremity and is of no account; but in the ear one centimeter is a big distance and may bring one very close to the sigmoid sinus which may then become diseased. The danger of such a complication is greater when there is no external opening in the mastoid process and supervening skin through which pus can drain. Four cases of mastoiditis in which there was no such opening and in which the hyperemia treatment was tried ended with sinus involvement. While the Bier treatment may not have been the sole cause of the latter complication, it probably aided in bringing it about. (5) In a certain class of cases with a superficial skin abscess in the mastoid region the treatment might be of value. Bier's and Heine's successfully treated cases came under this head. They always first incised the skin abscess without knowing, however, whether the bone was intact or not. Probably the mastoid abscess had ruptured into the subcutaneous tissue, in which case their good result can easily be explained by the free drainage which their skin incision with suction brought about. As Bier and Heine were not certain whether in their cases the bone was intact or not, it remains to be seen whether their method of treatment will be efficient in cases of mastoiditis with a superficial skin abscess where the bone has remained intact. (6) The treatment is contraindicated in all cases of mastoid disease in which complications are suspected.

Alcohol and the Infant.—Brunon draws a painful picture of the increase of drunkenness in France since spirits have been substituted for the wines of the country as a common drink. It has become the custom to give brandy and spirits to infants at the breast to make them sleep, and to children at their meals. The nurse takes spirits to increase her milk, and the pregnant mother to help the development of her child. The workman drinks brandy three times daily. The infant is poisoned before birth, cursed with the paternal heredity, and made a toper in childhood. Many children suffer as a result from skin and intestinal diseases, and the number of deaths is appalling. Nervousness, insomnia, bad temper, and constant crying are the results in young children. Older ones are the victims of tuberculosis, epilepsy, and crime. Absinthe is the drink of the young men, and it is the cause of the majority of crimes among the young. The effect of this state of things is evident in the small number of children and the large increase in crime, as well as in the smallness of the race, evidenced by the necessity of reducing the required statute in the French army.—Le Bulletin Medical.

Relation Between Acromegaly and the Sexual Function in Women.—Patellani has made experiments, as well as examined the histories of 145 collected cases. As a result of his studies he gives us some definite conclusions. He believes that the absence of menstruation bears a definite relation to the presence of the dicase. Experimental studies of the hypophysis have convinced him that its function is to regulate metabolism, and that its destruction causes accumulation of toxic substances and poisoning of the system. He finds that the classic form occurs most frequently between the ages of twenty-one and twenty-five years, and in virgins or sterile married women. It may result from injury, infective disease, prolonged lactation, and uterine atrophy. It never occurs before puberty or after the menopause, but is a disease of the sexual period. The normal menopause may be considered a physiological acromegaly. Amenorrhea is not only a symptom, but bears a causal relation to the disease. Laceration may end in uterine atrophy, followed by amenorrhea. In all cases of acromegaly in which the genitals were examined during life or after death these organs were found small or atrophied. Ovulation may go on during the disease, and pregnancy occur, but lactation will generally precipitate the development of the disease. It may exist unobserved for from one to five years.—Annali di Ostetricina e Gynecologia.

The Oponic Index in Cerebrosphinal Meningitis—Taylor (Lancet) has studied the opsonic index and the agglutinative powers of the blood in eight cases of cerebro-spinal meningitis. She states her conclusions as answers to certain questions, as follows: 1. Is a high opsonic index pathognomonic of the disease It appears possible from these eight cases to obtain a definite opsonic index in cerebrospinal meningitis, either working with an old or young culture. A high index was present

in all cases; this appears to be due to the characteristic feature that normal serum has scarcely anl opsonic power against a young culture of the meningococcus. It is therefore probable that a high opsonic index is pathognomonic of the disease. 2. Is a hight opsonic index diagnostic in all forms of meningococcal meningitis? A high index is not always obtained if different strains or organisms be used. So that a normal index does not negative the presence of the disease. 3. Will it be possible by the difference in the opsonic index or agglutination associated with it to distinguish betwen the various forms of meningocci? The author was able thus to differtiate three stains. It sems probable that in order to obtain the fullest effects from a vaccine or serum treatment that the strain of organism employed in its preparation is of great importance.

Scurvy in Infants.—Broca (Gaz. des Hop.) states that infantile scurvy is rarer in France than in America or England because the children are generally nursed or fed on sterlized milk rather than on prepared foods. Sterlized milk will sometime result in scurvy, however. It appears rather suddenly in a child that is fairly well nourished, and the first symptom that is usually noticed is swelling of one or both of the legs; the limb becomes tender to pressure and painful on motion, and that causes temporary pseudoparalysis. Osteosarcoma, tuberculosis, and osteomyelitis must be differentiated. In infants that have no teeth there will not be any symptoms referred to the gums, but when the teeth have apeared there will be a swollen condition of the gums about the roots of the teeth. Later comes multiple lesions of the bones. The treatment consists of substituting for dead, preserved foods ,fruits in the form of orange and lemon juice, and vegetables. Puree of potatoes is well borne. The relief from the change of diet is immediate.

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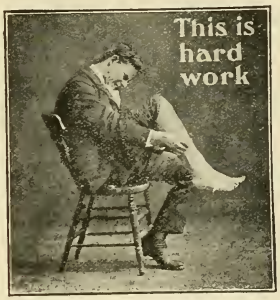

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VOL. XXXI CHARLOTTE, N. C., OCTOBER, 1907. No. 4

Ununited Fractures.

By Joseph Graham, M. D., Durham, N. C.

The operative treatment of ununited fractures has gradually improved in technique and method until now it is one of the most successful and satisfactory in surgery.

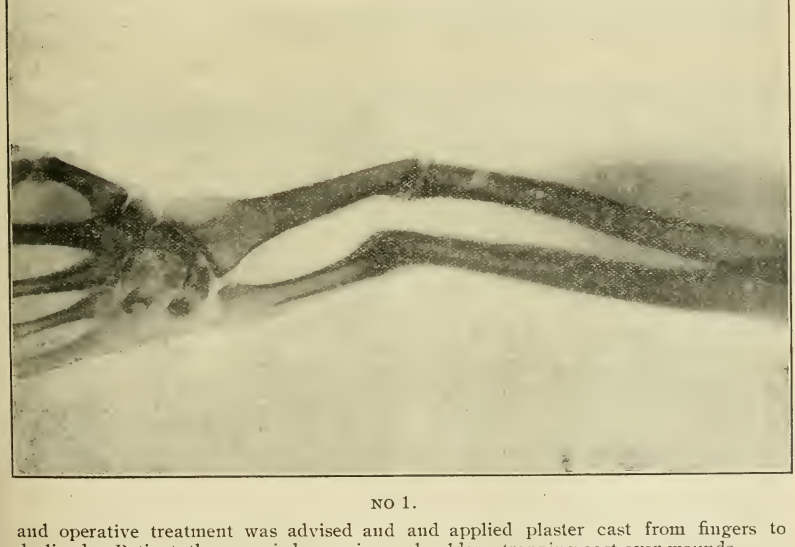
I will make no attempt to discuss the many interesting points of technique nor to describe the many ingenious methods that have been devised.

Case No. 1.—A. L. B. Twelve months before coming to me he received fractures of the ulna and radius, right arm, in railroad accident in West Virginia. Received prompt attention and was in splints for eight weeks. After removing splints he received a fall and arm bent. Sought advice and operative treatment was advised and declined. Patient then carried arm in a leather sling nine months and was wearing this sling when he came to me. Had not used the arm for twelve months. I made skiagraph No. 1 and advised operation. Advice accepted.

Operation.—An incision four inches long was made over the dorsum of each bone. The soft parts retracted and periosteum elevated. The ulna was rigidly united at a bad angle, there was no union of the radius, the ends being black and soft. The radius and ulna were united near elbow joint through displacement of the radius. I separated this false union between the two bones and then did a resection of both radius and ulna and sutured the ends together with chromic catgut, closed wounds without drainage, applied splints fixing elbow and wrist joints.

Results.—Union of radius, no union of ulna. Catgut suture broke and allowed interposition of muscle between ends of ulna.

Second Operation.—Same incisions, retraction of soft parts, elevation of periosteum and resection of both bones, then applied silver plates and fixed these with silver screws. Sutured wound without drainage and applied plaster cast from fingers to shoulder, strapping cast over wounds.



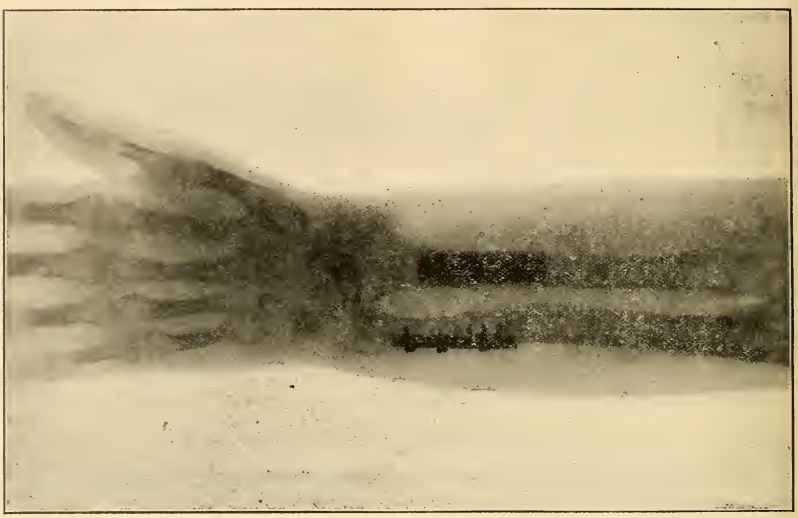
NO 1.

Result.—Wounds healed by first intention. Rigid union of both bones. Perfect function of the arm. Man is doing hard farm work and tells me that he suffers no inconvenience. The silver plates are still in place and so far have caused no trouble.

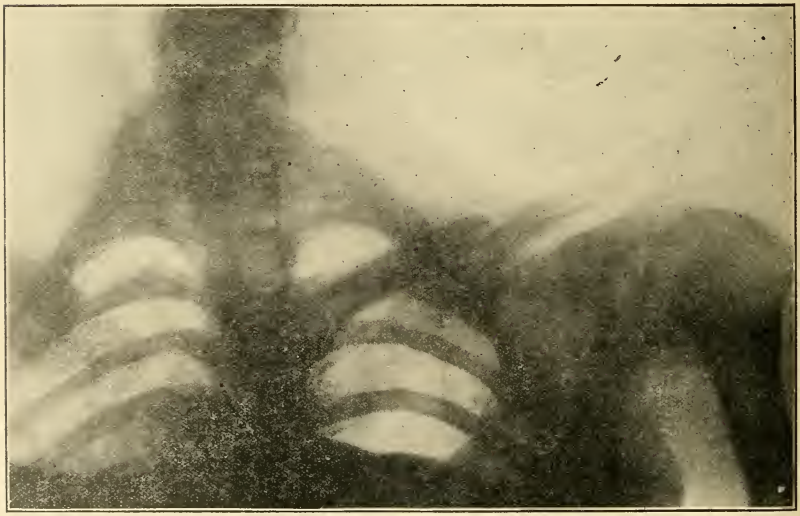
Skiagraph No. 2 shows the result in this case several months after operation.

Case No. 2.—Charles S. Fracture of right clavicle about middle.

History.—When called to this patient I



NO. 2



NO. 3

learned that this was the third time this bone had been broken. The first fracture was due to a load of coal falling on him while in naval service. He received prompt attention and had the Sayre dressing applied. Was in the hospital six months before he obtained union. Practically the same length of time was required for the second fracture.

On examination reduction was easy but immobilization very difficult. The ends would glide over one another. Little if any crepitus was heard. I then made skiagraph No. 3, and decided that he had never had bony union and therefore advised operative treatment. Advice declined and I retired from the case. A few days later I was asked to operate.

Operation.—Incision over clavicle and retraction of the soft parts revealed rounded ends of bone. Had fibrous union, no bony union. I resected the ends and plated them together with silver plate and silver screws.

Result.—Wound healed by first intention. Rigid union of the bone and perfect function. No inconvenience from the plate. Skiagraph No. 4 shows the result several weeks after he returned to work.

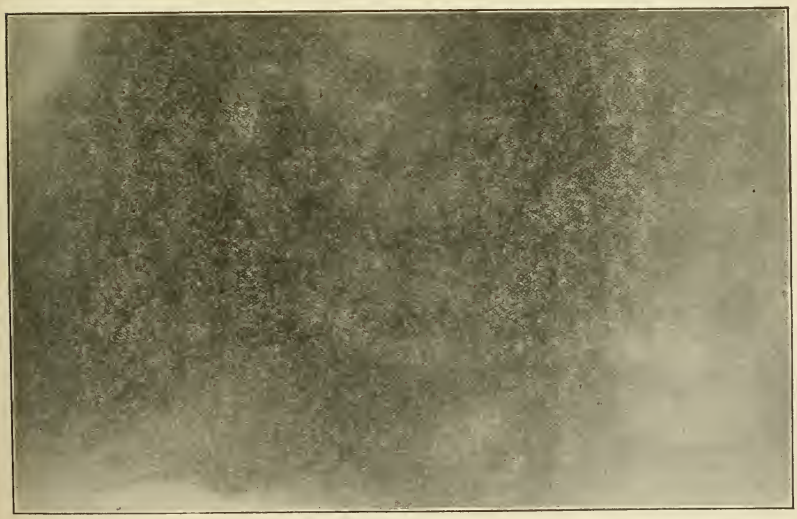
For successful results in these two operations I am deeply indebted to J. T. McCracken, D. D. S., who drilled the bones for me with his dental engine, and to Drs. W. A. Graham and J. M. Manning for their very efficient aid.

What the future of these plates will be I cannot say. When plates are buried deeply and well covered by muscle they rarely cause trouble, but when superficially placed, producing pressure on the skin, which does not bear pressure well, suppuration frequently results. It is a simple matter to remove them and noharm results for they have served their purpose, the production of rigid bony union.

As to the cause of non-union in these cases I am still in the dark.

The causes of delayed union or non-union of a fracture are usually classified under the heads of general and local. Under the general head are named many constitutional causes, including age, pregnancy, lactation, acute infectious diseases, anemia, richitis, marasmus, and syphilis. Probably none of these, except syphilis, is of much importance. Practically all of the ununited fractures I have seen have been in vigorous, active adults.

If there is any suspicion of syphilis, antisyphilitic treatment should be given. Personally I would prescribe potassium iodide in every case of delayed union.



NO. 4

The two cases reported were strong, robust working men. Both denied venereal history and careful examination revealed no evidence of the specific disease. Iodide of potassium was given just the same.

Under the local causes of delayed union the first and most important is wide separa-

tionlof the fragments. Second,interposition of the muscle or fascia between the ends. Third, immobilization. Fourth, infection and suppuration. Fifth, insufficient blood supply and failure of nutrition by too tight bandaging. Sixth, meddlesome surgery, too frequent dressing, premature passive motion, or too early use of the part.

The most frequent cause of non-union is undoubtedly due to some imperfection in the local treatment of the original fracture. The treatment of a case of delayed union calls for thorough examination of the individual. The urine and blood should be examined,the digestion improved and everything possible done to get the system in best condition. The local treatment will be greatly aided by X-Ray examination. In many cases it will be seen that mild measures are useless and will only produce a waste of time. Resort must be made to operative treatment, as nothing else will be effective.

Scar Tissue.*

By H. S. Lott, M. D., Salem, N. C.

Scar tissue creates neuroses. This fact was noted by careful observers long ago, but seems to have been lost sight of today, in the perfection of surgical technique, with its temptations.

For instance, let us recall the chain of reflex nervous phenomena arising from scar tissue in the uterine cervix; the result of a laceration at child-birth. The picture is so plain, since first it was painted by Doctor Emmet, that we cannot doubt its truth; and yet, because he can, the mechanical operator of today does not hesitate to create multiple scar foci,—without, through stab wounds—per vaginam, and multiple incisions for exploitation and drainage;—and within, throughout the more delicate tissues of the abdominal and pelvic viscera, in the ablation of organs for an imaginary pathology.

The problem for solution by the surgeon is not, will the patient bear, and survive the operation; but will its benefits throughout the future life outweigh the risk, and resultant scar tissue?

Wherein does our line of march in advancement lie; if not in recognition of conditions that *must be let alone;* lest we spoil the complement of anatomic arrangement, and physiologic life?

Thus, in Gynæcologic Surgery, the question arises,—is the young woman best off with her small cystic ovary, which we know to exist in a very large number indeed; so large, in fact, as to be almost a normal condition; or as the victim of *scar tissue* neuroses, which may perpetuate her invalidism?

Recently a patient, during my absence from home, fell into the hands of an operator possessed of greater *zeal* than *wisdom*, who found that the uterus must be haltered up to the abdominal wall,—the "cystic ovary, in a fearful condition," must be removed;—and the appendix, well! we'll just take that in passing.

As an "End Result," the patient has not only all of the old symptoms, including severe headaches, much intensified, but in addition, erratic, neuralgic pains,—throughout the abdominal and pelvic viscera,—from scar tissue.

When we break the continuity of skin, muscle, or visceral wall, we also interrupt the electrical current of nerve supply, and nerve control; normal currents are broken, new reflexes are established; and from this scar tissue focus the resentful echo may, and will, be heard, at many points throughout the human structure.

Therefore, let us always bear in mind the fact that pus and hæmorrhage are not the only dangers from which we must guard our patient, but the incision in the skin, or in more delicately organized internal structures, may be the source of irreparable reflex disturbance.

*Presenfed at the August meeting of the Forsyth County Medical Society.

Tubercular Antitoxin.*

By J. D. Gibson, M. D., Denver, Colorado.

Mr. President and Members of the Association:

The subjects of toxins and antitoxins have been for years of greatest interest to the medical profession.

Pasteur led the way into this misty realm of darkness in his discovery of the etiologic cause of chicken cholera, and his successful attenuating of virulent bacteria and using them as vaccines opened up a new field of medicine.

Closely following Pasteur's successes came the announcement by Koch of his discovery of tuberculin and Von Behring of his diphtheritic antitoxin, the utility of which he was able to demonstrate and time has only added to the lustre of his achievement.

These successes have only stimulated the scientific world and have caused a more interesting research in this interesting field, evolving much that is of use as well as many disappointments. Among all the subjects investigated none have received more attention than tuberculosis. The great majority of the members present today remember the great interest excited when Koch announced his discovery of tuberculin. How high

*Read before the recent meeting of the Colorado Medical Society.

the hopes ran, how eagerly information was sought on every hand, yet how disappointing were the results.

This had scarcely died away when our attention was directed to the "Watery Extract of Tubercular Bacilli," which many of us used, and not always, I am sorry to say, with brilliant results, because we used it in cases where later experience has proven it was contraindicated, and of course failure was the result.

Maragliano has gone a step further and uses "Injections of Specific Tuberculous Bacteriolysins Directly into the Lungs." He obtains his bacteriolysins by injecting animals with a watery extract of living tubercular bacilli from which he obtains his serum containing the bacteriolysins, which serum is injected directly into the lung tissue. He claims marked improvement in cough, expiration, temperature and night sweats. This, you will see, is different decidedly from tuberculin and the "Watery Extract of Tubercular Bacilli" of Von Rucks, as both are made from the extract of dead bacilli and ordinarily are not expected to be injected into the lung tissue. Lately there has been demonstrated a substance in the blood which has a distinct important power of influencing bacilli in such a way as to cause positive chemiotaxis or engulfment of the bacteria of the leucocytes. Wright and Douglas, Neufal and Rimpau have been the pioneers in this work and it seems that some good is to come out of their laborious experiments, but it is difficult to say just how much. They have demonstrated pretty clearly, I think, that the ordinary tubercular patient has what is called a low opsonic index, but small doses of tuberculin will raise this index or definitely increase phagocytosis. Human serum is supposed to contain different opsonins for different bacteria, and by the use of immune serums opsonizing power of the leucocytes can be greatly increased and the negative chemiotaxis can be changed to a positive chemiotaxis.

Wright and Douglas of England, Pogue, Dennison and others in this country have been calmly investigating the effects of tuberculin, Koch's latest tuberculin or T. R. as well as his latest glycerin mixture, and have recorded some brilliant results in the treatment of tubercular pulmonalis; in fact the results recorded by some make the statement of the illustrious Von Behring, that he believes he has been able to eliminate a substance from tubercular bacilli, which he calls T. C., that causes the hypersensitiveness to tuberculin, through which he hopes to change an "active immunity into a passive immunity," not so far fetched as may appear at first.

Roux and Vallee claim to have produced immunity in cattle by feeding calves with small quantities of cultures of living tubercular bacilli, &c., or in other words caused immunity through the alimentary canal. Calmette and Guerin obtained like results. I rather think from my own experience with streptolytic serum that the ordinary canal route will be a very important route in the production of artificial immunity. Prof. Theobald Smith has shown in his elaborate experiments that heating the tubercular bacilli to 100 degrees C. does not destroy the toxin of the bacilli entirely. I would suggest along this line might not the eating for ages past of beef affected with the bacilli have a great influence in establishing to some extent racial immunity, and might it not be, in rare cases, of use in establishing a personal immunity? The Jew for ages was an absolute abstainer from hog meat, but has always been a consumer of beef. Might not this have had something to do with their predisposed immunity, and is it not a fact that the greater amount of beef steak eaten, or, has not the beef eater the greatest chance of getting well and acquiring immunity? We have all noticed the effect of beef juice in tubercular conditions, and some one is continually making "the new discovery" of the value of beef juice in consumption. Therefore is it not possible for the juice of beef, beef that is immuned before death, to be of use in conferring immunity on the patient who drinks it?

So, now, Mr. President, after this brief review of the work that has been accomplished along the lines of immunity, I wish to bring before this Association an hypothesis of tubercular immunity. Some of you will remember in previous papers before this body I have claimed for X-rays only the power of producing local engorgement or hyperæmia of the lung, and on account of the increased nutrition, thereby afforded, nature was able, frequently, to fight a winning battle with the bacilli, where otherwise failure was inevitable. Practically the evolution of the tissues in the old theory is, I think, correct, but I believe that it does not go far enough and does not explain the startling and successful results in many cases.

H. B. Wilkinson, M. D., physician in charge of "San La Zara Hospital," P. I., (J. A. M. A., 2-3-06) reported thirteen cases of leprosy treated by X-rays and in which three were absolutely cured by means of X-rays, so that no lepra bacilli could be found. All except one, as I remember, were restored to usefulness.

In summing up his report the doctor called attention to the fact that the X-rays were able to benefit the bad cases, cases where

there were a great number of lepra nodules and ulceration that could be reached by the rays at one treatment, but in mild and incipient cases the rays seemed to have no effect. He advanced the hypothesis that the lepra bacilli were killed by the rays and that they were then absorbed by the system, being of the endotoxin group, when absorbed the toxin was liberated into the blood and lymph streams where they excited accordingly a production of specific antibodies to be thrown into the blood for their neutralization, which cured his cases.

The part of this most highly interesting paper that attracted my attention most was the different effect of the rays in the mild and severe cases.

I had noticed the same effect in my tubercular work, but was at a loss to account for it. I had often noticed that the mild, incipient cases of tuberculosis, which will get well under almost any kind of treatment, will progress very little faster with X-rays than without it. In fact they are nearly all unsatisfactory cases, while my best results are with advanced and nearly hopeless cases.

Therefore, I have come to the conclusion from clinical experience that I am causing with X-rays in advanced and suitable cases, a destruction of tubercular bacilli, bacteriolysis, which being absorbed into the blood, the toxin, which being an endotoxin, is very likely set loose into the blood and lymph stream, arousing a reaction and production of antibodies or amboceptors of Ehrlich, or probably in their own mysterious way increasing the opsonic index of the individual, even to the point of changing the negative chemiotaxis for an absolute positive chemiotaxis so that the phagocytosis may be increased sufficiently to take care of all the emergencies that may arise. In other words you may produce in suitable cases by means of X-rays an autospecific or tuberculin toxæmia, arousing a reaction of the host to the liberated toxins that may be of great benefit to the patient. You will notice that there is a wide difference in the class of cases in which X-rays has given me the best results and the cases in which the tuberculin group of agents are advised. For instance, these agents are recommended to be used in cases only where there is no elevation of temperature, no mixed infection, no pleurisies, no cavities, no unresolved pneumonias. They are to be used in strictly incipient or chronic tubercular infections, where, if you get any toxins to amount to anything, they must be introduced from without, while in cases best adapted to X-rays you must have germs in sufficient quantity in the pleura, lungs, glands or somewhere in the body to cause by their destruction the toxin desired. Acute cases with high fever, unresolved pneumonias, pleurisies with or without effusion, cavities, consolidations and adhesions, none of which are a bar to X-rays, if the effect is properly guarded.

Mr. President, I do not want to be understood in this paper to advocate X-rays as all that is needed in tuberculosis pulmonalis, glandular tuberculosis, or tuberculosis abdominalis; while in advanced cases in my hands it is worth more than all other artificial agents combined, yet it must have its adjuncts, rest, diet, sunshine, fresh air, change of climate, when it can be judiciously accomplished, and medical agents. According to my idea the adjuncts arranged in importance are as follows: First, diet; second, rest; third, sunshine; fourth, change of climate and surroundings; fifth, fresh air; sixth, medicinal and hygienic measures as indicated. I think the fifth of this grouping, fresh air, is the most harmfully accenuated agent in the whole category, and when you couple with it the customary idea "exercise" that is frequently instilled into the patient's mind on leaving home for a change of climate, you have, in a large measure, before you the cause of the vast majority of failures and deaths of these individuals. Nothing can be more absolutely harmful in high altitudes for sick individuals than exercise, which many think is necessary for "fresh air." Fresh, pure air is a necessity, can be had anywhere and in greatest abundance, but is not absolutely a specific for tuberculosis.

I will call attention to a few skiagraphic prints to illustrate to you the points claimed in this paper.

No. 1.—M. C., an incipient case of tubercular involvement of the left lung, shown on careful physical examination as well as by the skiagraph. Result, improved slowly, but surely. X-rays hastened the progress very little, if any; results as far as X-rays was concerned unsatisfactory.

No. 2.—Mrs. R., sent to Colorado from Philadelphia and said to have slight tubercular involvement of the left apex. Skiagraph failed to show it, I think. My developer thought he could make out a slight shading of the left apex, and the lady herself thought so and wanted X-rays herself from what she had seen in other patients. To satisfy her and husband, I gave her X-rays for a short time and quit as I could see no benefit in her case, and I relieved her by other means.

No. 3 is a case that has been dismissed for over a year. He has become a successful farmer or rancher, as they are called in Colorado. He has held his own, in spite of much hard work and "batching it" on his

ranch, and when you look at his skiagraph, you will have no trouble in making out a very knotty lung. This gentleman had been in Colorado for over one year doing the best he could to get well, but had lost over thirty pounds and was thinking seriously of returning to his eastern home and giving up the fight when he came to me. He gained 19 pounds the first month, and in three months weighed 168 pounds, being more than he had ever weighed before.

No. 4.—Miss W., from Indiana had been in Colorado for about one year when I first saw her and constantly under the care of one of the most accomplished and successful physicians in the city of Denver. She had a distinct chill and rise of temperature almost every day during this period. She was confined to her bed when I saw her and had a temperature of 103 in the afternoon. Her physician had advised her to return home, saying that the climate nor himself had done her any good, and she had just as well return. Arrangements were all made for her return home in a few days when I saw her. I advised her to let me see what I could do for her in one month and if we made no improvement she could return home. I told her frankly that I thought her physician was correct and that without X-rays she had no hope for recovery. She is today doing splendidly, has gained 18 pounds, and the lung consolidation has lessened considerably, but the cavity near the center of the left lung is yet unhealed. The patient is dismissed from treatment for the present, but kept under observation; is up, and allowed to take moderate exercise, being in six pounds of her highest weight, results so far being satisfactory.

No. 5.—Mr. T., of Atlanta, Georgia, had been in Asheville and Denver together for about two years, had lost weight and had an annoying cough and suffered a good deal from chronic pleuritic adhesions. The skiagraph shows the condition. He now weighs more than he ever weighed before and is back at the present time in Atlanta on a visit, condition very satisfactory.

No. 6.—Mrs. M., had been in Colorado for over one year; normally large, robust and stout lady, but contracted tuberculosis from a sister, who died with the disease, continued to lose weight and did badly after coming to Colorado. Her skiagraph shows her condition. She was treated three months and was allowed to return to her home in Indiana in May. She reports a very flattering condition of continued improvement and the case has been very satisfactory in every way.

Now, in closing, allow me to say, as a physician, I have brought every agent at my command, medicinal and otherwise, when indicated, to help the X-rays in all my work. That it has succeeded, I believe, is due more to X-rays than to any one agent. Climate, it is true, helps a great deal, but you will notice nearly all cases reported above were failures, as far as climate and medicinal agents were concerned, until brought under the influence of the rays. I could report scores of cases but these six will be sufficient to illustrate the points intended to be brought out in this paper.

Epilepsy—Its Treatment.

By G. Kirby Collier, M. D., The Craig Colony for Epileptics, Sonyea, N. Y.; Member North Carolina State Medical Society; New York State Medical Society; American Medical Association; National Association for Study of Epilepsy and Care and Treatment of Epileptics.

"Epilepsy is a disease or disorder affecting the brain characterized by recurrent paroxysms which are abrupt in appearance, variable in duration but generally short, and in which there is impairment or loss of consciousness, together with impairment or loss of motor coordination, with or without convulsions." (Spratling).

According to statistics gathered by various observers, one person in every five hundred of the population has epilepsy, and by some the ratio is even stated as high as one to every three hundred.

Epilepsy has been recognized and studied since the days of Hippocrates, the Father of Medicine, and no better description can be had of the disease as ordinarily considered than that given in his works. But it is only during the last decade or two that any especial study has been given to the pathology and the chemical pathology of the disease. Owing to the many advances made in clinical methods and in pathological technique, there has been an increasing interest taken in the clinical studies of epilepsy, and as a result, the field of epileptic therapeutics has grown larger. The introduction of the use of bromides in 1857 also served as an impetus to clinical study.

The epileptic had long been looked upon as incurable, and it was the custom, and still is in some communities and States, to place him in the county house or jail to eke out his miserable existence as best he may. He was given merely custodial care and oftentimes not even that, but allowed to wander and roam at will and often at the mercy of evil designing persons. He was cast aside as incurable and only when his mental condition reached a stage of dementia, or acute mania following seizures, did the authorities see fit to take him in charge in order to prevent his doing injury to himself and others.

Since the introduction of the use of bromides the percentage of recoveries from this most horrible of all man's afflictions has increased until today we are enabled to state that from 4 per cent. to 12 per cent. of all epileptics recover. This includes the epileptic idiot and imbecile, for whom but little can be done. Were it possible to recognize all epilepsies early and place them under treatment before the so-called "epileptic habit" is formed, I doubt not that the recovery rate would be doubled, and *it is possible* to recognize the condition in its early stage.

The treatment of epilepsy can be divided into three divisions:

1. The moral or hygienic.
2. The medicinal.
3. The surgical.

The plan of treatment which is applicable in one class of cases is not efficient in another, for example, the treatment of the so-called idiopathic congenital epileptics differs widely from that of the traumatic and toxic cases. In the one class we find that the bromides exert a favorable influence, while in the others we may find a most deleterious effect. As in all other diseases, we have learned to treat the individual more and more. In the past the treatment was directed at the one symptom—the subjection of the convulsive seizure, but today the individual is receiving more and more attention, and the "fit" is being relegated to its proper place in treatment.

1. Moral Treatment.—By moral treatment, I mean the careful regulation of the diet and habits, discipline, and the highest possible development of the physical, mental and moral states. Every epileptic is at times an irresponsible agent and his mental condition at these times should receive careful consideration at the hands of his medical adviser and attendants. He should be taught habits of obedience, restraint of the passions and appetite. His mental and physical activities should be controlled and industrious habits instilled. His education should not be neglected on account of his disease, as many epileptics have become sufficiently skilled in various arts and trades to compete with non-epileptic individuals. Many of the world's great men were epileptics—great in spite of their epilepsy. Among these may be mentioned: Caesar, Napoleon, St. Paul, Petrarch, Mohammed, Handel, Swift and Richelieu.

In order that this so-called moral treatment may be carried out more properly, colonies and hospitals for the separate care and treatment of epileptics have been established in many States in this country and abroad, most prominent among these being the Ohio Hospital for Epileptics at Gallipolis, Ohio, The Craig Colony at Sonyea, N. Y., the Massachusetts Hospital at Palmer, the New Jersey Colony at Skillman, the Kansas Hospital at Parsons, the Bethel Colony at Bielfiel, Germany, and many others both in this country and abroad. The epileptic is receiving more and more consideration at the hands of the medical profession and the charitably inclined public, and I am very glad to know that North Carolina will in the not distant future make some provision for her dependent epileptics. Not only from a humanitarian standpoint should this be done, but from an economic view also. Institutions for the insane, the tubercular, and general hospitals for the acute sick have been established, but no provision is made for the epileptic.

The Colony system as practiced today has been attended with most excellent results. Such institutions consist usually of a large tract of land—suitably located—with access to the centers of population, but sufficiently distant to escape their hurtful influences. Small buildings or cottages are erected instead of the usual large dormitories, each building being separate and independent of the others and having its own kitchen and dining room. They are made as homelike as the appropriations will permit and the patient is made to feel that this is to be his home, for a while at least, and probably for the remainder of his days. Everything tending toward institutionalism is thrown aside and the institutions are really villages in themselves. Various industries are carried on, and large farms and gardens are conducted, both to permit of the patients working out of doors and in order to lower the cost of maintenance.

The one idea is to induce the patient to return to the simple mode of living, to live nearer to nature, as it were, and throw off all that is artificial in life. The patient is under the absolute control of his medical advisers and everything conducive to his welfare is done for him. A hospital is built to which all the acute medical and surgical cases may be transferred, and where the patient on admission may be held under observation. The cost of maintenance under the Colony system is found to be even less than that of the hospital system. Although more individual houses are maintained, there are a larger number of patients of the working class.

In such institutions, where the patient may be seen daily by his physician, and his every move regulated, the treatment is far more effective than in general practice. His diet is carefully regulated both as to quantity and quality. Much has been written on diet in epilepsy, but I think the rule as to the individual should govern in the

greater number of cases. Spratling sums up his dietary as follows: "The principles underlying a suitable diet for the epileptic are simple. They embody the use of bread stuffs, butter, milk, cereals, etc., to the exclusion of too much meat, pastry and other less digestible articles." The toxic origin of many cases of epilepsy indicates that a more rigid dietary should be instituted in these, and in all cases it should be remembered that the epileptic is a natural gormand and the quantity of his food should be carefully regulated. Gastro-intestinal disorders, especially constipation, intestinal fermentation, etc., often act as determining causes of the convulsive seizure, and the closest attention should be given to the condition of the digestive organs and their activities. As alcohol and tobacco increase the irritability of the nervous system, they should be scrupulously avoided. In many cases it is advisable to restrict the patient to a strictly vegetarian regeme, with the addition of milk. Later fish and eggs may be added and the nitrogenous food stuffs increased slowly. Turner advises the use of the purin-free diet in the more recent cases of epilepsy and in those having seizures of the Grand Mal type which occur in series. Careful attention should be given to the proper preparation of the food.

As has been shown, the bromide salts exert very unfavorable action upon the gastro-intestinal tract and many of the digestive disorders met with in epileptics will clear up rapidly when the bromides are discontinued.

The average admission to institutions for epileptics is found to be taking large doses of the bromides, either in the form of one of the so-called "epileptic cures" so extensively advertised, or he has with him a mixture of the Bromide salts ordered by his medical adviser. He is found on examination to be thin, pale, anæmic and morbidly depressed. The tongue is heavily coated, offensive breath, loss of appetite and digestion is much impaired. The skin is cold and clammy and is the seat of an acneiform eruption of various types—papular, vesicular or pustular—and at times ulcers being found. The reflexes are lessened and sensory phenomena are impaired. He has a dull, stupid expression and there is a tendency toward progressive mental enfeeblement. These cases are not only met with in institutional practice, but are seen daily walking about the streets, an example of what injudicious medication will do. In such cases, and in all others, a thorough physical examination should be made. The family history and early life of the patient should be inquired into and any possible facts bearing on the case should be noted. The blood, urine, sputum, gastric contents and feces should be examined and treatment instituted as called for. The individual and not the epileptic should receive the first consideration. Any defect in vision should be corrected, enlarged tonsils, nasal growths, adenoids, carious teeth and impacted cerumen should be removed, and any other abnormal condition corrected.

Medicinal.—There is no specific in the treatment of epilepsy. Improvement only is noted, when upon a careful study of each individual case, a combination of methods is employed. To do this, it is necessary that he be placed under the absolute control of his medical adviser, as it is well nigh impossible to carry out a strict regimen in the average home; to convince the patient and friends of the many little details of living, of eating, sleeping and work—all necessary for his welfare. And even though convinced of the wisdom of the advice, they see the many difficulties in carrying it out. The ideal method is that carried out in the colonies or similar institutions. I mean nothing disrespectful to the home, but we may well imagine how difficult it is for a parent to refuse an afflicted child, even though she knows that it is injurious to him.

The drugs used in the treatment of epilepsy are varied, the Bromides having held the first place for many years. Much has been written of the abuse of the Bromide salts, and justly so, but with it all, the Bromides are most successful in causing a cessation of the seizures. As to the Bromide salt to be used, there seems to be a wide diversity of opinion and most authorities agree that the best results are obtained from preparations of the mixed Bromides, sodium, potassium and ammonium. The strontium salt is less liable to produce the unfavorable gastric symptoms and acne. The use of the smaller doses, 3 grains three times a day, given with copious draughts of water, are many times found as useful as the larger doses. This can be increased to 10, 20 or even 40 grains, but should not be continued for any length of time unless status epilepticus or serial epilepsy develop, and in such cases it is well to combine it with chloral hydrate. To obtain any curative results it is necessary to continue the Bromides sufficiently long and in such doses as to obtain the physiological action of the drug. The salt may be given alone, dissolved in water or in combination with other drugs as nux vomica, arsenic, chloral hydrate, etc., but in whatever form given, it should be accompanied with large draughts of water. A combination of strontium bromide and sodium bicarbonate has been recommended by Pugh, and the Bechterew mixture of

sodium bromide with adonis vernalis and codeine has been used with success. Iron bromide in half grain doses is recommended in those cases requiring the use of a hemitinic. Fowler's solution of arsenic has been largely used to combat the skin eruptions of bromism, but in many cases sodium arsenate is found to be preferable. In those cases in which the Bromides have failed of success, Fleichig recommends the use of opium in sufficiently large doses to keep the patient in a state of mild opium narcosis for six weeks, withdrawing the opium suddenly at the end of that time and substituting large doses—120 to 130 grains daily—of the Bromides for two months, after which it is gradually reduced. This is heroic medication, and the patient should be kept under careful supervision during the treatment.

Owing to the similarity, both chemically and physically, between the chlorides and bromides, Toulause and Richet, some years ago, recommended the substitution of the Bromide salt for the ordinary table salt or sodium chloride, used in the preparation of and seasoning of the food for epileptics. Much success has been had with this method of administering the Bromides, and much larger doses can be given, 10 grains of sodium bromide being as effectual as 30 grains given in the usual way. The disadvantage, however, is that this method is not adaptable for home treatment in the average home.

The elimination of the Bromides is a slow process, the excretory organs being unable to throw off the excess as fast as it is taken in. To promote elimination, I have used a bromide-ferrated-aperient water with some success—an artificial bromide mineral water. This consisted of the concentrated solution of the sodium, potassium, calcium and ammonium salts with the addition of magnesium sulphate. The Bromides were used in the strength of sodium bromide six parts, potassium bromide three parts, calcium bromide two parts, ammonium bromide one part and magnesium sulphate eight parts, being added to a quantity of water sufficient to make one hundred and twenty-eight volumes of a concentrated solution. It is made a ferrated water by the addition of one fluid ounce of the tincture ferri citrochloride to the concentrated solution. The dosage of the Bromides is easily regulated, and the magnesium sulphate with the large quantities of water ingested has proven beneficial owing to its action on the gastro-intestinal canal, kidneys and skin. The amount of Bromides given is approximately eleven grains to the half pint. The object is to have this Bromide water take the place of the ordinary drinking water at meal times, two ounces of the concentrated solution being added to one quart of water and the patient given one glass or one-half pint at each meal or as often as the case demands. In my series, no cases of acne developed, and there was a marked diminution in the number of seizures.

The hypodermic injection of the sterile 10 per cent. solution of the Bromides has been recommended, but is often followed by abscesses. In status, injection of sterile solution of 30 grains to the ounce, has been used by lumbar puncture, after 10 or 15 cc. of the cerebro-spinal fluid has been withdrawn.

Bromopin.—Bromopin is a liquid compound of bromine and oil of serame, containing 10 per cent. of bromine and is used in one to four dram cases, best given in the form of an emulsion. Very favorable results have been had from its use as a substitute for the Bromides. As usually given in the form of an emulsion it is nutritious, increasing the bodily weight. It may be used hypodermically in cases of status, and in infants and children may be given in the form of enemata.

Borax.—Borax has been used with some success, the dosage having been as high as 130 grains in some cases, but owing to its ill effect on the gastro-intestinal tract, its use has not been very widespread.

Chloral Hydrate.—Chloral hydrate is used chiefly in combination with the Bromides in the treatment of status or serial epilepsy. The most favorable combination is two parts of the Bromide salt to one part of chloral hydrate.

Amylene Hydrate.—Amylene hydrate in doses of five minims to one-half dram has proven to be most valuable in some cases, especially those characterized by frequent Petit Mal seizures, and in the condition of status epilepticus. It has no perceptible influence on the heart and respiration, and may be given hypodermically.

Nitr- Glycerine.—Nitro glycerine in cases of senile epilepsy with an arteriosclerosis has been found to be of benefit, and also in those cases accompanied with periodical attacks of migraine. Both nitroglycerine and sodium nitrate are valuable agents in the treatment of the Petit Mal type of seizures when given in connection with the Bromides.

Chloretone.—The use of chloretone has not been as wide-spread as this drug deserves, and many of the failures are no doubt due to the large dosage used. Five grains three times a day has been found to produce a most profound somnolence with hallucinations lasting four or five days. When given in two grain doses it is often followed by a lessening of the frequency of

the seizures, without the lethargic condition.

Brometone.—Brometone occurs in the form of prismatic crystals with a camphoraceous odor and taste and is given in doses of five to ten grains three times a day. It may be given in capsules, or better in the form of an emulsion and is useful in those cases showing an idiosyncrasy for the Bromides.

Hyoscine Hydrobromate.—Hyoscine is useful in status when given hypodermically and also in those cases showing a tendency to mental excitement following seizures.

Chloroform.—Chloroform is most useful in controlling the seizures of status or serial epilepsy in order to allow any medication given by rectum to exert its influence.

Dormial.—Dormial is an additional product of chloral and amylene hydrate and is given in doses of 30 to 40 grains. It is useful in status cases, and no injurious effects have been noted from its use.

Cerebrin.—Among the animal extract-used may be mentioned cerebrin. In idiopathic cases which have resisted the usual medicinal treatment it has been used with success. It may be given in conjunction with a salt free diet and the use of the Bromides. The dose of cerebrin is from 3 to 5 grains.

Among the various intestinal antiseptics used may be mentioned salol, beta-naphthol, bismuth, salicylate guaicol carbonate, sodium salicylate and others; and as tonics strychnine, arsenic, the hypophosphites, phosphorus acid, and iron are all at times of service. As a constructive, cotton seed oil has proven to be most beneficial. In conclusion, I might say that there is hardly a drug in the pharmacopoeia; there is hardly a material in the vegetable or animal world that has not been used in the treatment of epilepsy, and that has not been lauded at some time or another.

Hydrotherapy.—Hydrotherapy is an important aid in treatment. Many epileptics are known to be suffering from an autotoxosis with an increased irritability of the nervous system and deficient circulatory capacity, and a vigorously active skin means a more perfect elimination of the toxins. In these cases, hydrotherapeutic measures have been used with most excellent result, but often the benefit noted is due to the relief of the bromide intoxication. Tepid baths at a temperature of 125 deg. F. given twice a week, and a cold douche of average temperature of 75 deg. F. daily, each to be followed by a brisk massage, are most beneficial. In institutions where special apparatus is installed, this treatment may be carried out more perfectly by the aid of hot air cabinets, douches, etc., but in the average homes these treatments can be given by exercising a little ingenuity.

Surgical Treatment.—Those cases amenable to surgical treatment may be divided into two classes:

(1) Cases which call for the relief of some peripheral irritation, as that of the nose, eyes, skin, mouth, ears and genital organs.

(2) Cases in which surgical interference is directed to the nerve centers.

In the first class may be placed those cases which are thought to be due to a local irritation, such as adenoids, nasal polypi, eyestrain, phimosis, dental caries and abnormalities of the female genitalia. Many cases show improvement after the removal of a nasal or rectal polypi, the correction of a deflected nasal septum or the use of suitable glasses for the correction of some refractive error. Carious teeth should be removed, and improvement has been noted after the adjustment of suitable artificial means of mastication. All pathological conditions of the female genitative organs demanding surgical treatment should be attended to, irrespective of the epilepsy, for we have seen the results of the indiscriminate removal of the ovaries and other generative organs for the so-called cure of epilepsy.

The confidence in the remedial value of brain surgery in epilepsy has diminished in recent years. Only a few years ago it was claimed that 50 to 60 per cent. of those cases trephined recovered, but today it is evident that a much smaller number, only 4 or 5 per cent., show any marked improvement. The earlier observers were misled by the fact that the greater number of epileptics improve after any surgical intervention just as there is frequently a lessening in frequency or even a cessation of the seizures during and immediately following any acute illness. The subsequent history of the greater number of these cases shows that there is a return of the seizures. No case of epilepsy should be reported "recovered" until two years have elapsed since the last seizure, and it would probably be safer to give five years as the limit.

In the uncomplicated idiopathic cases no surgical treatment should be instituted, but in those cases with local symptoms trephining with excision of the irritated portion of the cortex of the brain is of benefit in a small number, and only when the operation is performed early.

In all cases of supposed traumatism, a most careful examination should be made —the nature of the injury, the character and mode of onset of the seizures, and the fact that the traumatism may be only a coincidence must be considered. All cranial operations are best performed by the osteoplastic flap method, and after exposure of the cortex a tumor, if found, should be ex-

cised, a cyst removed, or any damaged area cleared away. If the seizures have been focal or of a Jacksonian type, excision of the motor center controlling the convulsive movement is called for. Drainage of the lateral ventricles has been recommended in idiopathic epilepsy, this being based on the theory that epilepsy is due to an increased intracerebral pressure.

On the theory that the idiopathic cases are due to an anæmia of the brain, excision of the cervical ganglia of the sympathetic is recommended. The effect of this operation is similar to the effect of amyl nitrite. Jannesco first brought to the attention of the profession this operation, and in 1900 he reported nearly one hundred cases. The winter after, collecting two hundred and three cases, he reported a recovery rate of 6.6 per cent.

Splenectomy in Banti's Disease: With Report of a Case.*

By Gaston Torrance, M. D., Surgeon to St. Vincent's and the Hillman Hospitals, Birmingham, Alabama.

Banti, the Italian Pathologist, first described the syndrome which bears his name in 1882.

The spleen becomes enlarged without known cause; is firmer than normal but still preserves its normal contour. A progressive anæmia develops later with occasional periods of remission. The skin becomes bronzed or pigmented with some jaundice; this may be called the first stage and in some cases lasts from three to ten years or longer.

The second stage may last only a few months; the urine becomes scanty, high colored, loaded with urates and contains urobilin.

The third stage usually shows ascites with Laennec's cirrhosis.

Etiology.—Barr says it is probably due to a vaso-motor paresis of the splanchnic area, either in whole or in part, arising from disease of the visceral sympathetic ganglia. As a consequence there is a great engorgement of the abdominal viscera; and especially the spleen and the liver; and increased hemolysis with consequent oligochromemia and oligocythemia. The increased blood supply to these organs leads to fibrosis and lessened function. The peritoneal effusion is due rather to vascularity than to portal obstruction.

Harris and Herzog think the enlarged spleen is responsible for the destruction of the red cells and advance the theory that there is an erythrolytic enzyme secreted by the increased numbers of endothelial cells found in the spleen of these cases and feel that this view is substantiated by the fact that there is an immediate improvement in the blood picture after removal of the spleen.

Symptoms.—Cardiac palpitation on exertion with a feeling of unusual muscular fatigue may be the first symptoms noticed. There may be headache and slight pallor of the mucous membranes. After a few months the patients attention is attracted by a tumor in the left hypochondriac region and there may be a sense of weight or tension. Soon afterwards nausea and vomiting and at times a persistent diarrhoea may occur.

Headache and dizziness may be troublesome. Epistaxis is a common early symptom. There may be cutaneous hemorrhages or bleeding from the gums or other mucous membranes. There is a progressive anæmia with pigmentation or bronzing of the skin and some jaundice.

Abdominal pain with distension of the stomach and bowels, dyspnœa, dysuria, cramps in the legs, &c., are common symptoms.

Etiology.—The normal spleen weighs 200 grammes and measures 12x8x2 cm. The changes in the spleen are fairly uniform and consist in great enlargement, sclerosis of the capsule reticulum, sclerosis and atrophy of the Malpighian corpuscles (a marked point of differentiation from leukæmia, in which the Malpighian bodies are increased. Cabot), and atrophy of the pulp. In other cases the normal texture is largely replaced by fibrous tissue and large endothelial cells, with clear protoplasm, containing two or more nuclei. The splenic veins are markedly sclerosed.

The lymph glands are as a rule not enlarged. There is usually an increase in the marrow of the long bones; in some cases it is fatty and in others there is a red atrophy.

The liver shows slight increase in its interlobular connective tissue. Infiltration of round cells is observed about the portal vessels and between the lobules. Banti has reported a case in which there was considerable increase in the connective tissue, which he described as a perilobular hepatitis.

The Blood.—The coagulability is much reduced. The cells are as a rule reduced, the reds ranging from 4,000,000 to 568,000. The corpuscles are pale. Neucleated reds have not been found. Roleaux formation is absent in the later stages. The whites are not increased as a rule. The relation of the different forms is not disturbed. No abnormal elements have been recorded. A few cases have been reported in which there was a leucocytosis. The color index is lowered.

The following cases illustrate the con-

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ditions described above:

Case I.—Spencer Wells, in 1865, operated upon a woman 34 years of age, who had marked anæmia with slight increase of the whites, resulting fatally. The spleen weighed 2672 grammes.

Case II.—Pean, in 1876, removed the spleen of a woman 24 years of age. She first noticed the tumor eighteen months and the anæmia six months previously. The anæmia progressed steadily. There was great disturbance of digestion, severe neuralgic pains, hæmoptysis, hæmatemesis, hæmaturia and bloody stools. No leucocytosis. The spleen weighed 1125 grammes. The patient recovered perfectly in a months time but died later of a toxic enteritis.

Case III.—Czerny, in 1878, removed a large spleen from a woman 34 years of age. She was anæmic, had digestive and menstrual disturbance and her general health was poor. No leucocytosis. Spleen measured 23x12x8 cm. She made a complete recovery.

Case IV.—Franzolini, in 1881, operated upon a woman 22 years of age, removing a spleen weighing 1526 grammes, with complete recovery. Her health had never been good; she had suffered from edema and ascites at 12 years of age, from which she recovered. She began to have pain in the region of the spleen two years before operation. Her suffering and anæmia increased. There was great muscular fatigue and obstinate vomiting. Leucocytosis was increased five times the normal. After operation her suffering ceased and a month later the whites were reduced to one-half the number found at the time of the operation. This case was reported as a leukæmia but was not so considered by Banti and Sippy.

Case V.—Frascani removed the spleen of a girl 16 years of age, resulting fatally in four hours from hemorrhage. She had noticed the tumor two years before and during this time had occasional attacks of epistaxis, fever and diarrhœa. The anæmia was noticed one year later and was marked at the time of operation. There was also edema and ascites. Hemoglobin 68 per cent.; reds 3,900,000; whites 7,030. Some glandular enlargement. The spleen weighed 1310 and the liver 1050 grammes.

Case VI.—In 1892 Lindfors removed the spleen of a female 22 years of age, who had noticed a tumor five years before. She was quite anæmic. Red corpuscles much reduced and the hemoglobin markedly so. The relation of the whites to the red corpuscles 1 to 250. The spleen measured 25x15x7 centimeters. The patient recovered.

Case VII.—Ceci, in 1893, removed the spleen of a girl 13 years of age with recovery. Her trouble began two years before with anæmia and tendency to hemorrhages from the gums. She was quite thin with muscular weakness. Hemoglobin 65 per cent.; reds 3,592,000; whites 15,000. Weight of spleen 1300 grammes.

Case VIII.—Colzi operated upon a woman who died several days afterwards from a septic puerperal complication.

Case IX.—Colzi operated upon a young man who was in perfect health nearly three years afterwards.

Case X.—Colzi's third case was a woman who was reported in good health nearly two years after operation. No anæmia.

Case XI.—Picou and Raymond, in 1896, reported the case of a woman 32 years of age who had had menorrhagia for a year and the enlarged spleen was mistaken for a uterine fibroid. The symptoms were vague abdominal pains extending into the lower extremities, swollen and bleeding gums, some digestive disturbance and edema of the ankles. The blood changes were those found in simple anæmia. Weight of spleen 2800 grammes; measurements 26.5x14.2x9 centimeters.

Case XII.—Cushing, in 1898, removed the spleen of a man 33 years of age. He made a good recovery and gained 30 pounds in weight. He was reported living and well eight years later with no return of the hemorrhages.

Case XIII.—Osler reports a case operated upon by Halsted in 1898; the patient was a man 33 years of age whose trouble began ten years before. He had hematemesis and bloody stools. Hemoglobin only 25 per cent.; reds 3,000,000; whites 2,800; multinuclears 84.4 per cent.; large and small mononuclears 9.4 per cent.; transitionals 3 per cent., eosinophiles 2.8 per cent. He made a good recovery and continued well when heard from a year later.

Case XIV.—D'Arcey Power operated upon a woman 43 years of age in 1899. Three and a half years previous to this time she had struck her side over the region of the spleen; two years later she noticed that the lower part of her abdomen was increasing in size. When operated upon the spleen was found to be suspended by a pedicle four inches long made up of fatty connective tissue with enlarged veins and splenic artery. The spleen weighed 17 or 18 ounces after having been in alcohol for six months. Blood examination made eight days after operation showed reds 4,230,000; whites 17,000; polynuclears 65.5 per cent.; lymphocytes 18.75 per cent.; large mononuclears 12.5 per cent.; epsinophiles 3.5 per cent. She made a good recovery.

Case XV.—Bovaird's case operated upon by A. J. McCosh in May, 1899, was a

girl 16 years of age. Thirteen years before her mother noticed an enlargement of the abdomen which had steadily increased. Her face and hands became deeply bronzed. Blood examination at this time showed reds 3,550,000; whites 7,000; large lymphocytes 15 per cent., normal 4-8 per cent.; small lymphocytes 21 per cent., normal 35 per cent.; multineuclears 62 per cent., normal 62-70 per cent.; eosinophiles 1.4 per cent., normal ½-4 per cent. Weight of spleen 2½ pounds. The patient died three hours after operation.

Case XVI.—Harris and Herzog report a case operated upon in May, 1899. The patient was a female 22 years of age; when eleven years old she fell from a swing; she was in good health for two years when she began to have some discomfort about the stomach and accidentally discovered a tumor in the left side of the abdomen. Six months later she had an illness with severe hematemesis, abdominal distension and fever lasting three months. Two and a half years later had another hemorrhage from the stomach. Menstruation began at 17 and was regular and normal. From this time on her health became gradually worse. Three months before operation she had a severe illness with marked pain in the upper part of the spleen with abdominal distension, and it is very probable that an infarct which was found in the spleen at operation occurred at this time.

A brownish pigmentation of the skin was found, and especially of the face, neck, arms and abdomen. Hemoglobin 40 per cent.; reds 2,631,000; whites 2,650; and at the end of second day 15,000; third day 11,560; 17th day 5,688. Eosinophiles at the end of 7th month 14.4 per cent.; 20th month 11.4 per cent. The urea was increased about 4 grammes daily after operation. Temperature 103.8 deg. F. on the third day and ranged from 99 to 102 for two weeks. She gained 25 pounds in three months and went back to work. She had a return of the gastric symptoms about four months after operation, but made a good recovery and was in good health about two years after operation and the skin was clearing up. Weight of spleen 1055 grammes. Measurements 21x13.5x7 centimeters.

Case XVII.—Nancrede operated upon a man 41 years of age in November, 1899. The portal vein was found to be partially closed by a fibrous valve containing calcarious plates. The splenic and mesenteric veins were very much distended and their walls much thickened. Weight of spleen 1536 grammes. The patient did not recover.

Case XVIII.—Harris and Herzog operated upon a man 47 years of age in September, 1900. Nine months previous to this time he began to have pain in the umbilical and epigastric regions with loss of weight—30 or 40 pounds. The skin was of a dirty yellow color but there was no pigmentation. Spleen much enlarged but there was no enlargement of the liver or glands. Hemoglobin 50 per cent.; reds 3,364,000; whites 28,200; color index 0.74. There was an increase of polynuclears; no plasmodia. Three weeks after operation hemoglobin 62½ per cent.; whites had decreased 4,000. No increase of eosinophiles. Weight of spleen after having been hardened in formalin 600 grammes. Measurements 18x12x6 centimeters. He made a good recovery and was doing well when heard from last and was attending to business.

Case XIX.—J. Colins Warren removed the spleen of a man 26 years of age in 1900. Two years previous to this time he began to have diarrhœa and suffered with distress after eating and vomiting. He improved under treatment but had a recurrence every few months. About a year later he noticed a tumor in the left side about the size of a grape fruit. He lost weight and at the time of operation had dyspnœa on exertion and was unable to attend to his business. Hemoglobin 65 per cent.; reds 5,200,000; whites 2,200; multinuclears 70 per cent.; lymphocytes 22 per cent.; eosinophiles 3 per cent.; megaloblasts .07 per cent., normoblasts .01 per cent. Two days after operation the whites increased to 24,000. Weight of spleen 1155 grammes. Measurements 21x16x8 centimeters. He made a good recovery and is reported perfectly well and attending to business six and a half years later.

Case XX.—Jaffe reports a successful case in 1900 operated upon in the last stages with an enormous amount of ascites. The liver was found to be cirrhosed and he suggests that Talma's operation should be done at the same time. There was a wonderful improvement in the patient's condition, notwithstanding the cirrhosis of the liver.

Case XXI.—Tscherniachowski reports the case of a female aged 25 years in whom the splenic enlargement had been diagnosed essential hypertrophy and had existed five years, increasing in size and the patient losing strength, in spite of all treatment. There was a complete recovery.

Case XXII.—Cushing operated upon a man 38 years of age in 1900, who died ten days later from the rupture of an oesophageal varix.

Cases XXIII and XXIV.—Armstrong quotes two cases operated upon by Mayo. Both recovered; one died a year later, cause of death not given; the other was living nine months after operation.

Case XXV.—W. S. Halsted, in 1901, operated upon a man 30 years of age; the

patient died of hemorrhage on the table.

CASE XXVI.—Bevan's case died from hemorrhage and shock a few hours after operation. Large calcarious plaques were found around the spleen, and especially between it and the diaphragm, with numerous adhesions.

CASE XXVII.—Gordan removed the spleen of a man 45 years of age in June, 1902, weighing 3635 grammes, with recovery. He was reported to be in perfect health seven months later and had gained 28 pounds. Hemoglobin 85 per cent.; reds 4,000,000; whites 6,600.

CASE XXVIII.—Jonas operated upon a man 39 years of age, in 1902, who had first noticed an enlargement of the left side six months before. There was no impairment of digestion. Some large veins were noticed on the left side of the abdomen. No hemorrhages. The liver extended about 2 inches below the border of the ribs. There was a bronzed condition of the skin of the chest, back, abdomen and parts of the thighs. No pigmentation. Hemoglobin 60 per cent.; reds 4,500,000; whites 25,000. Some accessory spleens were found at the operation and were left. The fresh spleen weighed 7¾ pounds. Measurements 18¾x12¾x8½ inches. Infarcts varying from the size of a pea to a walnut were found. The patient made an uninterrupted recovery and was reported well at the meeting of the American Surgical Association two years later.

CASE XXIX.—Clarke, in January, 1904, removed the spleen of a colored woman 21 years of age, weighing 1230 grammes. Armstrong quotes a letter from Dr. Stengel, dated July, 1906, in which he says she is quite well and that her condition is practically normal.

CASE XXX.—Lespevres operated upon a female 32 years of age in 1904 with recovery. Some cachexia and anæmia persisted five months later.

CASE XXXI.—Hart removed the spleen of a boy 14 years of age in 1904. He made a good recovery and was reported perfectly well two years later and was able to run an automobile, swim and row.

CASE XXXII.—Konig, in February, 1904, removed the spleen of a boy 15 years of age which weighed 1300 grammes. The jaundice had almost disappeared in twelve days and the liver, which was much enlarged at the time of operation, seemed normal at the end of three weeks.

CASE XXXIII.—Harris removed the spleen of a man 60 years of age in April, 1906; he died a few hours after operation. There was great enlargement of the splenic veins.

CASE XXXIV.—G. E. Armstrong, of Montreal, in January, 1906, operated upon a man 26 years who five years previously was struck by the elbow of a companion in the region of the spleen and afterwards vomited some dark material. Tenderness persisted for ten days and the spleen became enlarged. He was examined by Dr. Osler two years later and he found some enlargement of the left lobe of the liver and considered it a case in the early stages of Banti's disease. Blood examination at this time hemoglobin 90 per cent.; reds 4,700,000; whites 5,000; multinuclears 80 per cent.; large and small mononuclears 15 per cent.; eosinophiles 2 per cent.; transitionals 3 per cent. Dr. Stengel saw him about two months before operation and considered it a case of Banti's disease and advised splenectomy. He had been slightly jaundiced for some months and had considerable digestive disturbance. Weight of spleen 1000 grammes. Measurements 22x13x8 centimeters. He was reported in perfect health nine months after operation with normal blood count and no appreciable alteration in the size of the liver.

CASE XXXV.—W. P. Carr operated upon a man 49 years of age in July, 1906, with great enlargement of the spleen and slight enlargement of the liver. His health had not been good for a number of years and he had lost considerably in weight. About eighteen months previously he fell and struck his abdomen over the region of the spleen, on the end gate of a wagon and was unable to turn himself in bed for six weeks. Has had severe diarrhœa but no hemorrhages. No blood examinations were made. Microscopically the spleen showed increase of connective tissue and Malpighian bodies. He made a good recovery and was reported in good health several months later with no return of the diarrhœa.

CASE XXXVI.—The author's case was operated upon in February, 1907. The patient was a female 35 years of age, the mother of five children. Her general health has always been good. No history of malaria or syphilis. For the past year has had more or less digestive trouble, some nausea, considerable gas distension of the stomach and bowels. Bowels constipated. The symptoms that first attracted her attention were headache, pain in the back and in the left side—there has been a sense of weight and dragging in this region. The tumor was first noticed about nine months ago. She was treated for "kidney trouble." There has been considerable muscular weakness and she has been unable to attend to her household affairs with any degree of comfort and is scarcely able to go up town. No hemorrhages. Slight enlargement of the liver. The splenic dullness extends from the upper border of the ninth rib down al-

most to the crest of the ilium. The spleen cannot be felt through the vagina. Some tenderness in the region of the spleen. The skin has a dirty yellow color slightly bronzed. The urine was negative except for a slight bile reaction and high specific gravity. As there was some question about the tumor being the spleen the urine was segregated and both kidneys found to be functionating normally and about equally. Sahli's Iodoform Glutoid Kapsulen was given to test the function of the pancreas.

Blood Examination.—Hemoglobin 85 per cent.; reds 4,800,000; whites 8,000; multinuclears 75 per cent.; lymphocytes 20 per cent.; large mononuclears 4 per cent.; transitionals 1 per cent. Under ether an incision was made beginning at the lower border of the twelfth rib and running down in front of the anterior superior spine of the ilium; the kidney was found to be in its normal position and the peritoneum was opened and the spleen found to have some adhesions anteriorly which were divided between ligatures and the spleen delivered and the pedicle tied with a heavy linen ligature, a portion of the spleen tissue was left to prevent the slipping of the ligatures. There was no hemorrhage and the wound was closed in tiers with heavy chromic catgut. The wound healed kindly and she had no discomfort for two weeks when she began to complain of pain in the abdomen and legs. Her pulse became more rapid and her temperature ran up from normal to 101.4 F. and she seemed to be rather weaker. She was immediately put on extract of red bone marrow and in the absence of any extract of spleen the fresh spleens of the cow and sheep were given twice daily. Later we gave Armour's extract of spleen, 3 grains after meals. Her temperature was normal in about a week and the pains in her abdomen and legs had about disappeared. The extract of spleen was kept up for a month or six weeks.

Blood count three weeks after operation; hemoglobin 80 per cent.; reds 3,246,000; whites 6,000; multinuclears 76 per cent.; large mononuclears 11 per cent.; transitionals 9 per cent.; eosinophiles 4 per cent.

Her digestion soon became normal and she has not been troubled with the flatulency any more.

Her skin has cleared up and she seems to be perfectly well and normal and has gained 15 or 20 pounds and is probably pregnant now, seven months after operation.

The spleen measures 15x8x7 centimeters. There is a large fibrous growth involving about three-fourths of the capsule on the outer side and in places is almost a centimeter in thickness. On section this part was very hard and the spleen tissue seemed harder to cut than in a normal spleen.

Dr. James S. McLester gives the following pathological report:

"A specimen of tissue from the spleen which you sent was frozen for sectioning, fixed in formalin and stained in hæmatoxylin-eosin, and presents the following:

The capsule is greatly thickened, being in places fully a half centimeter in thickness. Throughout the entire organ is seen a pronounced increase of fibrous tissue; the trabeculæ are thickened throughout and the Malpighian bodies are smaller than normal; they also show an increase of the fibrous tissue.

No proliferation of the endothelial cells is seen.

The blood vessels are larger and more numerous than in the normal organ."

Analysis of Cases.—Of the thirty-six cases reported above nine died, a mortality of 25 per cent.; 17, or 47 per cent., were females; 15, or 42 per cent., were males; in 4, or 11 per cent., the sex was not given.

Under 20 years of age	5	or 13.9%
Between 20 and 40	18	or 50.0 "
Between 40 and 50	6	or 16.6 "
Ages not given in	7	or 19.5 "
	36	100.0%

TABLE OF CASES REPORTED UP TO THIS TIME.

Date	No.	Operator	Sex	Age	Result
1865	1	Spencer Wells	F	34	Death
1876	2	Pean	F	24	Recovery
1878	3	Czerny	F	34	Recovery
1881	4	Franzolini	F	22	Recovery
——	5	Frascani	F	16	Death
1892	6	Lindfors	F	22	Recovery
1893	7	Ceci	F	13	Recovery
——	8	Colzi	F	—	Death
——	9	"	M	Y'n'g	Recovery
——	10	"	F	—	Recovery
1896	11	Picou and Raymond	F	32	Recovery
1898	12	Cushing	M	33	Recovery
1898	13	Halsted (Osler's case)	M	33	Recovery
1899	14	D'Arcy Power	F	43	Recovery
1899	15	McCosh (Bovaird's)	F	16	Death
1899	16	Harris and Herzog	F	22	Recovery
1899	17	Nancrede	M	41	Death
1900	18	Harris and Herzog	M	47	Recovery
1900	19	J. Collins Warren	M	26	Recovery
1900	20	Jaffe	—	—	Recovery
——	21	Tscherniachowski	F	25	Recovery
1900	22	Cushing	M	38	Death
——	23	Mayo	—	—	Recovery
——	24	Mayo	—	—	Recovery
1901	25	Halsted	M	30	Death
——	26	Bevan	—	—	Death
1902	27	Gordon	M	45	Recovery
1902	28	Jonas	M	39	Recovery
1904	29	Clarke (col. patient)	F	21	Recovery
1904	30	Lespeyres	F	32	Recovery
1904	31	Hart	M	14	Recovery
1904	32	Konig	M	15	Recovery
1906	33	Harris	M	60	Death
1906	34	Armstrong	M	26	Recovery
1906	35	Carr	M	49	Recovery
1907		Torrance	F	35	Recovery

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325-28 Woodward Building.

Diagnosis of Barlow's Disease.—Starck (Munch. Med. Woch.) says that the picture in infantile scurvy is rarely typical, and that diagnosis must often be made from the appearance of one or two symptoms. When a child between the ages of five and fifteen months loses appetite, is sleepless, and gives evidence of pain in dressing and undressing and on movement, we should think of scurvy rather than rickets. Scurvy is more apt to occur in families that are better off and in which the child has been fed on prepared foods than among the poor who nurse their children. The typical symptoms are anemia, hemorrhagic swelling of the gums, pain on movement, swelling of one or more extremities, hematuria, and hemorrhagic swelling of the eyelids and exophthalmos. Anemia may be a symptom of other conditions. Swelling of the gums is absent in children whose teeth have not yet appeared. When present the gums take on a bluish-red swelling and bleed easily. Hematuria may not be present. When calomel is given to a syphilitic child it is well borne, but in scurvy a single dose may produce stomatitis. The amount of alteration of the bones depends on the pathological changes. There may or may not be hemorrhage between the epiphysis and diaphysis. It affects the long bones of the lower extremities first, then those of the upper, later the ribs. It is generally symmetrical on the two sides. The X-ray shows an increase of shadow between the ends of the shafts and the epiphysis, followed by atrophy. Swelling of the lids and exophthalmos result from hemorrhage into the orbit. The immediate curative effect of vegetables and fruits is of digestive value.

Cancer of the Uterus.—Laurent (La Revue Medico-Sociale) summarizes the definition of cancer as a disease that is often latent and insidious, manifesting itself by the triad of symptoms, pain, hemorrhage, and leucorrhea. Pain results from infiltration of Douglas's cul-de-sac, pressure on the sacral nerves, and concomitant metritis, while it may be absent in the ulcerations produced by the disease. It is especially early in cancer of the body. The lymphatics and parametrium may be invaded early or very late. The ligaments are early attacked in most cases. Cancer of the body is slower and less malignant than that of the cervix. Duration is from six months to eight years. One-third of the cases of cancer of the uterus are of the cervix. It may be pavement epithelioma, cylindrical, or atypical epithelioma. In form it may be papillary, nodular, or excavating. Cancer of the body may be primary or secondary to that of the cervix. It is a cylindrical epithelioma, circumscribed or diffuse. Cancer extends to the vagina, adnexa, parametrium, glands, ureters, bladder, peritoneum, heart, and by metastasis to the other internal organs. It has to be distinguished from chronic metritis, benign papilloma, fibroma uteri, and polypus. It is more brilliant and granular than metritis, and more friable. Benign papilloma does not present condylomatous growths. Fibromata or papillomata of the cervix appear with the ring of the cervix surrounding them.

Pubiotomy in Private Practice.—Sigwart (Zent. f. Gyn.) advocates the use of pubiotomy in suitable cases in private as well as hospital practice. Symphyseotomy was an operation that was necessarily confined to hospital practice, owing to the need of assistants and the necessity for absolute asepsis in the surroundings. Pubiotomy by the subcutaneous method need involve no danger of infection. It may be done in the dwellings of the poor, with the assistance of students, or even of the laity, provided the operator can obtain sufficient light and room, and a firm table, on both sides 16 which the operator can pass. Few instruments and dressings are needed; hemorrhage is very moderate, and occurs in the form of a small hematoma contained within the tissues. The author has done pubiotomy five times in the patient's own house, and all the patients have recovered perfectly, with a firm gait and no disabilities. All the children have been delivered alive. All the instruments that he needed were a pubiotomy needle and some ordinary needles armed with sterilized catgut and sterilized gauze for tampons. It is well to have two flat specula to protect the vagina during artificial delivery of the child. The autho

describes his five cases. Labor was normal and without much pain. There were no lesions of the vagina during delivery. The only complication was a small abscess from a subcutaneous hematoma. The labor can be shortened by performing pubiotomy as soon as the head is fixed by the contractions. In multiparæ with well-stretched genitals a not too rapid forceps operation may be done without any damage to the parts. The extraction can be done without stopping the anesthesia, which is a great advantage in a private house. The after-treatment is very simple: a piece of gauze and some cotton, and a bit of plaster over the puncture, a towel about the pelvis, and for one week a catheter retained in the urethra include all that it necessary. At the end of three weeks the patient may get up. Forty patients operated on in this way in the clinic have all been cured. Lesions of the bladder have been few and of little importance. The same may be said of hematomata. If the section is made near the median line the pelvis separates easily and not too far. When it is too far out results are not so good. Any experienced physician accustomed to handle instruments and obsetric operations may successfully accomplish pubiotomy in a private house.

Successful Treatment of Tetanus.

Galliard (La Tribune medicale) reports the following unusual case: A woman of intemperate habits had an attack of morbilliform erythema distributed over the body, which was succeeded by free desquamation of very large scales. There were multiple ulcers upon the lower limbs, which had existed previous to the eruption. Two weeks after admission (November 4th) into the hospital, she had some trismus, but without fever or severe pain. She was ordered six grammes of chloral hydrate. Five days later there was retraction of the head, with contractions of muscles of the nucha, the shoulders, and the limbs. At this time, antitetanic serum was given in doses of 20 c.c., and the daily quantity of chloral was increased to 10 grammes. In spite of this treatment, the symptoms gradually grew worse. The temperature went up every evening to 40 deg. C. (104 deg. F.), the pulse was accelerated, and got up to 150 at times; the respiration was interrupted by distressing attacks of suffocation. At this time (November 16th), in addition to the antitetanic serum, the reporter gave sixty centigrammes of phenic acid, subcutaneously, during the day. These injections were continued for six days, the total quantity of phenol amounting to 3.60 grammes; but she gave no evidence at any time of toxic action. On the 19th of November she first showed decided improvement, and subsequently steadily progressed to recovery. She was discharged on December 20th, when the cure was complete. Paucot (Le Nord medical, reported the case of an Arab chief, thirty-five years of age, whose left hand was lacerated by a gunshot wound. It was dressed with hydrogen dioxide. The wounds had nearly cicatrized and had ceased to suppurate, when on the twenty-ninth day after the injury he had trismus, and this was followed by opisthotonus and muscular contraction. He was purged with castor oil and given chloral hydrate (15.0 grammes daily) and a little morphine. Subsequently the chloral was increased to 20.0 grammes and potassium bromide 10.0 grammes was added. On the third day antitetanic serum was obtained and 40 c.c. were injected. The next day it was noted that the constrictive pains around the thorax had disappeared. Chloral was continued 15.0 grammes daily. Another serum injection (20 c.c.) was given the next day, and also the chloral. This treatment was continued for a week, when on account of a return of slight convulsions in the muscles of the legs, a single dose of the serum was given, of 50 c.c. The next morning all the convulsive movements had disappeared, the stiffness of the neck had also gone, and the patient could open his mouth easily. No more serum was given, and only one more dose of chloral (10.0 grammes). On the twenty-first day the patient was able to walk; and on the fortieth day all traces of stiffness had disappeared. 170 c.c. of serum were used within thirteen days. 225 grammes of chloral hydrate appear to have been administered in eighteen days. Hypodermic injections of morphine (gr. ⅙) were given as required, about once a day. N. Y. Medical Journal.

Most of the vaccine used in France, says Red Cross Notes, is furnished by the Institute of Animal Vaccine in Paris. This institution provides for direct vaccination from the calf. Public vaccination is held usually in the street in the vicinity of a newly reported case of small-pox. The calf selected is brought to the spot in a specially constructed car and the vaccine is directly transferred from the pustules on the body of the calf to the arm of the person being vaccinated.

The usefulness of *good* Hypophosphites in Pulmonary and Strumous affections is generally agreed upon by the Profession.

We commend to the notice of our readers the advertisement on page xviii of this number. "Robinson's Hypophospites" are elegant and uniformly active preparations; the presence of Quinine, Strychnine, Iron, etc., adding highly to the tonic value.

Charlotte Medical Journal

EDWARD C. REGISTER, M. D., Editor.

No. 36 South Tryon Street, - - - -

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DR. P. L. MURPHY.

The death of Dr. P. L. Murphy at Morganton, Sept. 11, has cast a pall of sadness over the whole State. Not unexpected, for it has been commonly known for a year that some obscure pathologic condition was gradually but inexonrbly sapping his vitality and that it could be only a question of time with him, yet the general grief is not lessened by the announcement of the passing of one whose life and work has meant so much for his State.

On Oct. 23, 1848, Dr. Murphy was born in Sampson county near the town of Clinton where his childhood and boyhood days were spent and where he attended the village school. He was prepared for college at Bingham School and at the school of Col. Tew, at Hillsboro, and afterwards attended the University of Virginia, but did not graduate. In 1871 he graduated in medicine from the University of Maryland. Having secured his degree Dr. Murphy returned to North Carolina and began the practice of his profession in his native county. From Clinton he went to Wilmington, where he lived and practiced for several years.

Shortly after his marriage, in 1878, to Miss Bettie Waddell Bumgardner, of Virginia, he was elected physician to the Western State Hospital of Virginia, at Staunton, where he remained until 1882.

Dr. Murphy was called back during that year to North Carolina to take charge of the State Hospital at Morganton. That was twenty-four years ago. The hospital at Morganton was founded through the superb efforts of Hon. Joseph C. Mills and Col. S. McD. Tate, of Burke, who succeeded in getting an appropriation of $75,000 in the act of incorporation. The main building and south wing of that building were finished in 1882 and the board of directors met and elected Dr. Murphy as the superintendent.

This was the beginning of the great hospital at Morganton. Dr. Murphy gave his life to it and at the close of his career he leaves a monument that is finer than gold and more enduring than brass.

The hospital had accommodations for 150 patients, but in 1895 the number cared for there had increased to 700 and today there are more than 1,000. The splendid buildings, the beautiful, well-kept grounds and the fine farm at the Morganton hospital make it one of the greatest institutions of the kind in the world.

We believe that no finer or more fitting eulogy could be pronounced than that which appeared from the pen of the able editor of the Charlotte Observer, a close personal friend of Dr. Murphy's, the day after his death. We quote therefrom:

"The time and circumstances are not auspicuous to the writing of those things which should now be written, and yet no time would suffice for putting on record a fit memorial of this man. It is best writ in the magnificent institution over which he presided from the day of its opening until his incapacity, and in the hearts of the thousands of North Carolinians who in themselves or through family or friends were beneficiaries of his skill. It is not too much to say that he was the foremost alienist of the South or that the State Hospital at Morganton is at the head of institutions of its class in the section. It was his very life. From a red and barren hill he had seen the place transformed into one of surpassing beauty, and had witnessed the growth of the institution from a modest beginning into one which now shelters and cares for more than eleven hundred patients A multitude has entered its doors with minds diseased and emerged with reason restored and themselves restored to their families and to their usefulness to society.

"Of his skill in his specialty all North Carolina knows, and his executive ability, his tact in management, are scarcely less known. A Scotchman of Scotchmen, he was endowed with all the strength of mind and body, all the conviction and pertinacity of purpose, of the peculiarly strong and forceful race. The antipodal elements of rugged power and of tenderness which when we see united makes a product which we remark upon and wonder at, were perfectly blended in him, forming a character which compelled both admiration and affection. To him all men and women were as one. There were none too humble to enlist his sympathy or challenge his best skill and to the lowliest people of the State the news of his death will carry as keen a pang as will be felt in the hearts of the highest. It is his glory that in his exalted professional life he knew no distinction between classes.

"To undertake to recite Dr. Murphy's qualifications for his life work, how fully he met and surpassed every expectation, how grandly he lived up to his great opportunities and fulfilled his mission to humanity, would be only to repeat to North Carolina what is familiar history; and it is not certain that one who so much loved him as a friend and sorrows so greatly on account

of his death could write in moderation of him at his open grave. To thousands this event is a personal bereavement, greatest to those who knew the subject best. There was never a man more lovable in his close personal relations. The public admired him for his ability and all have gratitude toward him for what he has done for North Carolina. His familiars loved him for his golden heart, which was ever ready to melt in sympathy or at the call for charity; for the loyalty of his friendship, for his high honor and his unswerving fidelity to any cause which he espoused.

"Engaging in every way, Dr. Murphy added varied scholarship to his qualities of charm. There was no conversation to which he could not contribute; there was no company in which he did not shine. The pale messenger in beckoning him has called one of the front rank of North Carolinians.

"On the sloping, velvet-like lawn on which his eye has so often dwelt with delight, in the shadow of the great buildings which are his best monument, they will lay him away today to await the call for the accounting, to which he will answer unafraid, for the deeds done in the body."

As evidence of the esteem of those with whom he had lived in personal contact for a quarter of a century we print the resolutions drawn up by a committee, and presented before and adopted by a large gathering of the citizens of Morganton, who met simply to do honor to the memory of Dr. Murphy.

"We, the friends and neighbors of Dr. Patrick Livingstone Murphy, have met to commemorate his life and services. He has fallen in his 59th year, having finished the grand task allotted him. He had placed himself in the very front rank of American alienists and built up a modern hospital, so equipped as to secure every conceivable comfort and afford the most skillful treatment of mind and body.

"Well done, good and faithful friend and servant of mankind. Our Master was not only a great teacher, but a great physician, a healer of mind and body; and it is so ordained by Him that the most enduring service that mortal can render his fellows is found in the ever-widening influence of a teacher and a healer. To restore the unfortunate to their right mind as well as to the health of body is to follow in the footsteps of the Great Physician.

"Resolved, That as friends and neighbors of Dr. Murphy, we desire to bear testimony not only to his faithfulness to public duties, of which the world knows, but to his exalted character as a man, a citizen and a Christian gentleman.

"Resolved, That in his long intercourse with our townsmen, extending through a quarter of a century, we can recall no friction worthy of the name, so uniform, dignified and sympathetic was his demeanor and bearing. He ever felt himself to be the servant of the whole State and was sedulous not to allow local feeling or local friendship to run counter to a greater duty; yet he rejoiced in every onward step taken by the community and shared in every success which came to one of its citizens.

"Resolved, That knowing much of his ideal domestic relations, how generously he provided for his loved ones and bestowed upon them the pure coin of his strong, tender affections; and how in return they respected his every wish and gave him the deepest love of their lives, we extend to them in this their sacrament of sorrow our sincere sympathy, and beg for them the sustaining strength of the Divine Comforter.

"Resolved, That we commend the propriety of the course adopted by the directors of the hospital in ordering his remains to be interred in the grounds of the institution, and we shall ask our next member of the Legislature to introduce a bill appropriating a sufficient sum from the State treasury to erect a fitting monument over the spot.

"Resolved, That a copy of this memorial and resolutions be furnished the family and given to the press for publication.

"Respectfully submitted,
"A. C. Avery,
"W. S. Pearson,
"R. T. Claywell,
"F. P. Tate,
"C. F. M'Kesson,
"J. E. Erwin,
"L. A. Bristol."

THE SOUTHERN CLINICAL LABORATORY

We are pleased to note the establishment, at Wake Forest, N. C., of a modern up-to-date clinical laboratory. The scientific spirit which has moved Drs. Rankin and Gaines to engage in this work will doubtless lead physicians of the State to take advantage of what is coming to be recognized more and more as a real necessity in diagnosis—the use of laboratory methods. Doctors are learning that laboratory examinations of the blood, urine, sputum, tissues, &c., are as much a part of the physical examination of a patient as palpation, percussion and the use of the stethoscope. Correct diagnosis is something more than guess work, it means a thorough understanding of disease processes; a knowledge of the pathology of a case enables the doctor to treat his patient intelligently. However the advantages of clinical tests are admitted by all. Yet it is not always possible for one reason or another for the physician to make

his own examinations. He may not be able, because of lack of proper training, to do it; or since it requires patience and time, he may be too busily engaged otherwise to carry out the necessary tests. Thus he neglects it either for the above reasons or because the facilities for having it done are not at hand.

We therefore congratulate the promoters of the Southern Clinical Laboratory; there is a great need for just such an institution in this section. Drs. Rankin and Gaines are well-known, being prominent members of the faculty of the Wake Forest Medical School. They are splendidly equipped to do this work and every confidence may be reposed in their ability to give correct results. Aside from their own facilities and to further safeguard their work, they have made arrangements for consultation with two of the largest clinical laboratories in this country. Thus doctors will find near at hand an institution at which they can have any kind of clinical examination made quickly, correctly and most reasonably.

The Journal believes thoroughly in the success of these gentlemen; knowing them, it can but bespeak for them the confidence of the profession. Their advertisement appears elsewhere in these pages.

NEW METHOD OF VERSION IN TRANSVERSE PRESENTATION OF THE FOETUS.

At the recent meeting of the American Gynecological Society at Washington, a new method or at least a recognition of a natural method of version in cases of transverse presentations of the fœtus was discussed by Dr. A. F. A. King, of Washington. Woman in her natural state, unspoiled by the conventions and artificialities of civilized life suffers but little inconvenience in bringing forth her offspring. There are many reasons for this: among them is the rarity with which abnormal presentations take place. In primitive woman the fœtus *in utero* is daily subjected to the high pressure exerted on the abdomen by the thighs when the mother assumes a squatting posture during the act of defecation; the civilized woman surrounded by the luxuries of modern advanced life uses a commode or seat which prevents any such thigh pressure.

This is but one instance of the necessity which would cause a primitive woman to assume the squatting posture; all the methods of living and the customs of primitive society would more frequently require such a position. If one doubt the tremendous amount of pressure exerted by the thighs on the belly he has only to place his hand while standing erect in the neighborhood of Poupart's ligament and, while holding it there, squat. Naturally the pressure would be much greater on the abdomen distended by a fœtus. In a transverse presentation it would impinge upon the projecting head of the child in such a manner and direction as to lift the head off the shelf of the iliac fossa, over the brim, and into the pelvic inlet, thus rectifying the abnormal presentation. This is still further promoted by the pressure of the other thigh upon the opposite side, which, however, is exerted in a different direction and location, in such a manner as to press upon the breech end of the fœtal ovoid and lift it upwards and inwards toward the ensiform cartilage in the middle line.

This illustrates the principle: by manipulating the mother and having her assume postures which would cause pressure to be exerted at the points desired it has been possible to alter the presentation in a good many instances. When the woman for any reason is unable to assume the squatting position she may be placed on her back and the operator then manipulates her knees in such a way and holds them in such a position long enough to ensure the auxiliary rectifying influence of a few labor pains.

To illustrate we quote Dr. King's own words: Take "a case of left shoulder presentation, the back of the child directed anteriorly, the head being on the right iliac fossa, projecting somewhat in front of and external to the anterior spinous processes of the ilium. If, now, the woman planted her left foot flat upon the ground, and somewhat forward, while the right foot rested on its toes considerably behind the other one, and then assumed a squatting posture, one would see what took place. At once the knees would separate, owing to the abduction of the thighs, and as the squatting became complete, the left thigh come in contact with the abdomen and press upon it over a large surface, high up, upon that region of the uterus where the breech end of the fœtal ovoid lies. The direction of pressure on this side would therefore be obliquely upwards and towards the median line; while in the opposite (right) limb, with its foot poised on the toes and posterior to the other one, the thigh bone being more nearly horizontal, would produce contact and pressure over a more limited region of the abdomen lower down and impinge chiefly upon the projecting cephalic pole of the fœtal ovoid in such a manner and in such a direction as to force the head somewhat upwards and inwards toward the median line, thus shifting it from the iliac fossa to the pelvic brim."

It is the policy of the Journal to promote a fair and thorough investigation of new theories which promise well or seem reason-

able. New ideas are not to be accepted with enthusiastic approval simply because they appeal to the fancy. Still they should not be rejected as impracticable and foolish simply because they have not been proved. The theory of Dr. King's article above quoted is good. It remains for the profession to prove whether or not postural version shall take the place of the more difficult and unsatisfactory manual version in cases of transverse fœtal presentation.

SIGNIFICATION OF MUCUS IN THE STOOLS.

According to Nothnaegl, the presence of mucus in the stools is abnormal and pathological provided it be in sufficient amount to be detected with the unaided eye or even with the microscope. Yet mucus, the product of the goblet cells of the intestinal mucosa, can always be demonstrated in the feces by chemical examination. Boas emphatically takes issue on this point, since this substance is constantly secreted by the normally healthy mucous membrane. The latter authority calls to mind the fact that mucus is discharged in large amount after the administration of an active cathartic like castor oil. This, he says, cannot be called pathological.

The presence of mucus in the feces does not necessarily mean that an anatomic lesion exists in the intestine; it may be due to a physiological hypersecretion. And since there is no sharp boundary line between a physiological and a pathological secretion, it is not always easy to say whether or not the occurrence of this substance in the bowel passages, in appreciable amount, indicates a pathological state. It must however be clearly understood that the discharge of itself is nothing more than a symptom of overactivity of the goblet cells of the intestinal mucosa caused by some chemical, mechanical or infectious stimulus. There may or may not be associated with it an anatomic lesion, and if there is, it isn't proved what etiological relationship exists, if there is a relationship at all. Yet in the great majority of cases there is some pathological change.

In a highly instructive and interesting article by Dr. James P. Tuttle, published in the New York Medical Journal, we find this statement: If our stools were systematically examined it would probably be found that catarrhal colitis is as common a disease as catarrhal rhinitis.

According to this writer the character of the discharge has been found to indicate according to its variations not only a difference in degree but also a difference in the morbid condition causing it. Thus we find the terms mucous, muco-membranous, and membranous colitis according to whether the mucus appears in its original glairy state, or whether it is partially coagulated in strings, or whether it adheres to the intestinal wall and is subsequently discharged as a laminated membrane. The quality of the mucus is determined by the character and site of the lesion; the quantity by the extent of the same. Where the irritation is low down in the rectum or sigmoid occasioning frequent stools, the mucus is always glairy, unmixed with fæces, and without lamination. Where the irritation is high up in the bowel and of limited area it is passed mixed with the fæces and more or less coagulated, according to the frequency of the stools. Where the irritation is acute, causing frequent movements there is little or no lamination; where it is chronic, causing constipation, the mucus is cast off in a membranous form. As already stated, the quantity of the mucus is indicative of the extent of the lesions; thus immense quantities of mucus are sometimes discharged after drastic cathartics or irritative poisons through which the whole mucous membrane of the colon is irritated. Such a discharge of mucus is always associated with frequent bowel movements and the mucus is always glairy or slightly coagulated when first passed. When the secretion of mucus is slow, however, and the bowel movements retarded, the mucus coagulates upon the wall of the gut layer by layer, as it is secreted, and thus forms what is known as membranous colitis. Between this and the former there is the middle ground of muco-membranous colitis, in which the mucus is neither glairy nor laminated, but simply coagulated, and is usually mixed with or stained by the fæces.

As has been said the discharge of mucus is merely a symptom of the real pathological condition existing somewhere along the intestinal tract. Dr. Tuttle says: "Whatever excites peristalsis will produce mucous colitis," i.e. any cause sufficient to produce a catarrhal condition of the mucous membrane makes its existence known by a mucous discharge. According to the character of the mucus, Dr. Tuttle is able to draw certain conclusions as to the nature of the cause, but except to enumerate these conditions it will not be our purpose to deal with his deductions.

Thus he observes in those cases in which the mucus is not laminated, but glairy and slightly coagulated, various conditions have been observed such as polypi, epitheliomata, condylomata, strictures, acute flexures, ulcerations, foreign bodies and other conditions which irritate and excite peristalsis, as fermentative processes, infective agents such as the typhoid, tubercle, dysentery

and influenza bacilli, the pneumococcus, the germs which are associated with summer diarrhœas, and the amoeba coli. Likewise the frequent association of mucus discharges with neurotic states, as neurasthenia, hysteria, &c., justifies the assumption that a catarrhal state of the intestinal mucosa with consequent mucous discharges is in some way etiologically associated with the nervous condition. Yet the writer of the article from which we quote doubts this relationship on the following grounds: (1) that mucous colitis is more frequent in women while nervous states are just as common in men as in the other sex; (2) that the treatment of the neurotic condition being quite similar to that employed for the intestinal catarrh would in helping the former also benefit the latter; and (3) that surgeons find some organic intestinal lesion in almost every instance where there has been a hypersecretion of mucus, whether it be membranous or glairy.

Glairy mucus uncoagulated and unmixed with feces always indicates an irritative lesion which is low down in the intestinal tract, almost surely in the rectum or sigmoid.

Another cardinal principle is that whatever restricts peristalsis will produce a membranous discharge, or in other words, when the bowel does not reject the accumulated mucus, it becomes tenacious and laminated and forms a membrane-like covering of the wall. Then when peristalsis does occur, the mass is cast off as a membrane and we have the condition or symptom to which the name membranous colitis has been applied, as above. This arises as a result of some mechanical arrest of the fecal current. Fecal masses are retained at certain points, usually the caecum, the flexures, or diverticula, until they abrade the surface of the mucous membrane and allow infection, thus causing irritation of the goblet cells which increases the secretion of the mucus. Such a condition arises as the result of one or a combination of the following classes of causes: Mechanical, infectious and reflex.

A frequent cause is chronic appendicitis with the constant and long continued reinfection of the colon, and the formation of adhesion which increases peristalsis and causes obstipation of the fecal matter. Peritoneal adhesions from other infectious causes, or from malignant disease of the mesentery or pancreas by producing flexures and strictures of the gut may be responsible for the inhibition of peristaltic movement and therefore of a mucous discharge. Gallstones, by distending the gall-bladder, cholecystitis, disease of the bile ducts are likewise credited with having a causative relation, for the reason already quoted. Gastroenteroptosis, by producing acute flexures, is also put down as being responsible for a certain number of cases.

It is well known that cancer of the intestine anywhere from the pylorus to the anus sets up a catarrhal state of the mucosa with a consequent overproduction of mucus. Ulcerations act similarly. It would not be difficult to enumerate a great number of pathological lesions which might and do give rise to this frequent symptom. Enough has been said however to indicate something of the vast number of conditions from which catarrh of the bowel may result.

The terms "vaccine" and "vaccination" do not apply satisfactorily to the new treatment of disease by injection of killed bacteria, pursuant to the discoveries of Sir A. E. Wright, for strengthening the opsonic or resisting properties of the blood. A Philadelphia physician, Dr. David Riesman, suggests in American Medicine the new names "bacterine" and "bacterines," corresponding with "vaccine" and "vaccines"; "bacterinate" for "vaccinate," and "bacterination" for "vaccination." "Any or all untoward symptoms that might follow bacterination might be designated by 'bacterinia,'" he adds. Dr. Riesman formulates the objections to the old terms for the new use as follows:

1. On etymologic grounds—the word "vaccine" being derived from vacca—a cow.

2. On the ground that vaccine and vaccination have a specific connotation based on the Jennerian principle.

3. On the fact that vaccination is a prophylactic measure, while the injection of dead bacterial cultures is used principally for curative purposes.

DR. JAMES CARROLL.

The death of Dr. James Carroll, Major and Surgeon, U. S. Army, in Washington, Sept. 16, leaves a great gap in the ranks of scientific workers. His death was the result of cardiac disease, directly traceable to the attack of Yellow Fever which he suffered in 1900, while a member of the Yellow Fever Commission in Cuba. Many will remember how he voluntarily submitted himself to the bite of an infected mosquito, and four days later suffered a severe attack of Yellow Fever—thus proving the theory of the transmission of this disease by mosquitoes. Dr. Carroll's life hung in the balance for several days, and although he finally recovered yet it was only to spend the remainder of his days with a crippled heart which finally brought him to a premature death.

By this one act he proved himself a hero

and a benefactor of inestimable worth to mankind. He deserved the highest commendation from the whole world and the recognition by Congress of his valuable services must have been a source of gratification to him. By special act of Congress he had been promoted to Major and Surgeon of the Army Medical Corps, but being unfitted by reason of his heart trouble for active service, he was appointed Curator of the Army Medical Museum.

Born in England in 1854, Dr. Carroll come to America in early life and in 1874 he enlisted as a private in the U. S. Army. In him we have an example of what even a private may accomplish. Serving for fifteen years as hospital steward, studying medicine in his leisure moments he graduated from the Medical Department of the University of Maryland in 1891 and afterwards took postgraduate courses in pathology and bacteriology at the Johns Hopkins After serving as contract surgeon for several years he was, in recognition of his services as a member of the Yellow Fever Commission, permitted to stand the examination for admission into the Medical Corps of the Army although far beyond the age limit.

The medical profession should do honor to his memory.

SOUTHERN MEDICAL ASSOCIATION.

At the recent meeting of the Southern Medical Association at Birmingham, Ala., Dr. B. L. Wyman, of Birmingham, was elected president. Among the vice presidents are Dr. J. R. Holden, Florida, and Dr. A. L. Fowler, Georgia. Atlanta was chosen as the place of the next meeting.

Review of Southern Medical Literature

Texas Medical Journal, August, 1907.

Treatment of Infected Wounds.—Dr. E. Lanphear says that in badly lacerated wounds the method of cleaning is the same as that of a simple wound except as to the management of the wounded surfaces themselves. If there be grease and much dirt in the wound it is a good plan to clean it out with gasoline, followed by 65 per cent. alcohol, and then 1-2000 sublimate solution. All scraps of injured skin, muscle, etc., which are so injured as to be certain to die must be trimmed away with scissors—leaving them only makes infection worse. It is in these deep lacerated wounds that antiseptics like iodoform do good. A very useful preparation is camphor 39 parts, phenol 21 parts, liquid petroleum 40 parts. This may be poured into the wound freely, the excess being permitted to run into the gauze which is applied over the hole. It is especially valuable in wounds involving joints. If the bone be injured it is usually better to fill the depths with iodoform and cover with 10 per cent. iodoform gauze. At the second or third dressing wound secretion will be abundant. If putrefaction is going on there will be a disagreeable "stinking" odor and if it be necessary trim out dying tissue and pour in a considerable quantity of liquid phenol (i. e. 95 per cent. carbolic acid) almost instantly neutralizing it by pouring in pure alcohol. After a few days the amount of discharge may be very great from a large wound; so great that the surgeon desires to lessen it. For this purpose may be used resorcin 1 part, boracic acid 20 parts. Apply freely to all parts of the infected surfaces and cover with gauze and cotton. The practice of covering the dressings of these wounds with rubber tissue or oiled silk cannot be too severely criticized. Such "protective" simply adds to the ability of the bacteria to multiply. In some cases when granulation seems to be delayed too long it is good practice to cover the wounded surfaces with a few layers of bichloride gauze held in place by strips of adhesive plaster around the edges and place the patient where the wind may blow over the sore, or in winter to place the patient near a fire so that by evaporation of the watery part of the discharge the process of nature's "healing under a scab" may be simulated. After granulation has been well begun the less the surface is disturbed the better. Dressings should be changed only when becoming foul and the discharges must be merely mopped away—all water, hydrogen, peroxide, sublimate, sol, etc., should be banished save for cleaning the skin. Plenty of clean gauze and cotton with a loose bandage and perfect quietude will now do more than all the antiseptics made.

Virginia Medical Semi-Monthly, Aug. 9th, 1907.

Bier's Treatment with Hyperemia.—Dr. C. A. Robins quoting from the American Practice of Surgery, "Summing up then all the factors of the inflammatory process and viewing them in the light of modern research we see that in all animals and in response to all kinds of injury they are essentially the same, though often varying in proportion, and that their unity lies in a constant tendency toward protection and repair. Inflammation, therefore, as defined above can be regarded only as a process-complex, essentially adaptive, protective, and repairative, called into action by a primary tissue lesion. To this view nearly all he pathologies of the present day accede."

It will be seen from this that inflammation is no longer to be regarded as a diseased condition to be combatted, but rather the assemblying of all the forces of nature to combat an infection or repair an injury. This beneficent action is not to be explained by any one factor but all of the processes have to be considered as an entity just as an army in order to be complete must consist of all the branches of service, each having a different duty to perform. The far-reaching effect of the treatment we have under consideration consists in the fact that it is a method used not to combat the forces of nature but to reinforce them. It is as much a revolution in the treatment of suitable conditions as is Murphy's conception of the treatment of septic peritonitis. When an injury or infection is received it is followed more or less promptly by a hyperemia to which is given the name of inflammation. It is the visible sign of the marshalling of nature's army to overcome the invader. The object of Bier's method is to augment this condition or to induce it when not present. Hyperemia may be active or passive. Active hyperemia is best induced by the use of superheated dry air. The induction of passive hyperemia is easily accomplished. The technique is as follows: The limb is encircled above the affected portion by a rubber bandage which is applied with sufficient tightness to impede the venous return but not to shut off the arterial supply. This is allowed to remain on for about twenty minutes and is then removed. The application should be made at least once in twenty-four hours, but better every twelve and eight. The application is followed by a change in color below the bandage and an increase in heat and a slight amount of œdema. If the limb becomes cold the construction is too tight.

Principles of Surgery Lecture XXXII, Wounds (Continued) Contusions and Bruises, Burns and Scalds Causes, Pathology, Symptoms, Diagnosis, Prognosis and Treatment.—By Dr. Stuart McGuire, Richmond, Va.

The Southern Clinic, August, 1907.

Obstetrics in Country Practice.—Dr. W. T. Mares says that procedures to facilitate labor that are of much avail are: The sitz bath, the upright position, the application of an abdominal bandage and other mechanical aids. The bath must necessarily often be an improvised affair, but this can usually be tolerably well managed with an ordinary laundry tub. For this to be of any avail the woman should set in it at least half an hour and have more hot water added as the water cools. It is well to keep the woman on her feet or knees as long as possible, as cephalic dilitation is increased thereby. Of course this is not a rule to apply in all cases. In cases of tedious and prolonged labor there is seldom a mistake made in rupturing the membranes a little earlier than our authors allow. There is no well-defined rule as to when this operation may judiciously be performed. A severe case of postpartum hemorrhage is where the doctor earns his money by the sweat of his brow. Fortunately few women die of it. Nature is conservative and especially kind to the parturent woman. The treatment is old and stereotyped but the main thing is not to lose your head as the attendants have. Clear out the vagina and dip your hands in cold water and knead the uterus through the abdomen. Apply ice or a vinegar tampon to the cervix. Give ergot and brandy by the mouth and strychnine and glonoin hypodermically. Some prefer morphine to atropine. But the all important thing is to get that muscular body to contract. If hot water is at hand a stream may be thrown into the uterine cavity. As a dernier resort introduce the hand and remove clots and whatever debris remains. The last is a very dangerous procedure and should not be thought of until other measures fail.

Southern Medicine and Surgery, Aug., 1907.

Gonorrhoeal Urethritis with Special Reference to Diagnosis and Sequella.—Dr. A. W. Liscomb points out that urethritis is a simple inflammation developing after unclean intercourse or unclean instrumentation—sexual excesses or alcoholic indulgences Symptoms of this trouble vary greatly—the usual cause is coitus with a woman suffering with leucorrhoea. The one symptom of importance is the quantity of discharge always being rather scanty and requires milking to produce a show. This is not the case in gonorrhoeal urethritis. Typical acute gonorrhoeal urethritis is due to the gonococcus of Neisser. Such infection is due nearly always to sexual intercourse. Period of incubation varies from two to three days to two or three weeks since it depends on the organic strength of the microbic infection. In gonorrhoeal urethritis there is always constitutional symptoms such as general malaise, transitory fever, pains in the body, etc. Treatment. In acute cases flush urethra with mild antiseptic solution and keep the urine bland by giving oil Bucalyptol 10 minims t. i. d. Complications must be treated as they arise. The most common complication is vesical tenesmus, a trouble so agonizing that no patient can improve until this trouble is rectified. In such cases the author gives boracic acid and salol, and if necessary opium, belladonna, and hyocyamous sup-

positories. A large percentage of patients who come for treatment have a meatal stricture (congenital) so that a rapid cure cannot be perfected until meatotomy is performed. In those cases with a "morning drop" and slight burning on micturition you find on passing a sound that there is a stricture; if no stricture is found by an endoscopic examination will see granulation patches which can be cured by introducing full size steel sounds. In connection with sounding the author uses solution of protargol 1-2000 in ichthyol 1-1000 for flushing out the urethra every third day, in the meantime using the sounds. In no trouble is steel sound so essential to a cure as in these chronic cases where the urethra is in an anemic condition or in the presence of follicles or granulations—the pressure of a full sized sound empties the follicles of their contents—sets up a reactive inflammation in the areas of inflammation which if followed by the inflammatory infiltrates and restores the tonicity of the over distended blood vessels.

The American Practitioner and News, Aug., 1907.

Tuberculosis of the Bladder.—Dr. J. M. Sleicher gives the following under Treatment. Conservative treatment of tuberculosis of the bladder is preferable to any of the radical methods that have been employed. It should be the aim of the surgeon to let the bladder entirely alone and confine the treatment to climatic, hygienic, dietetic and tonic, which is appropriate to tuberculosis of any organ. No matter if local or operative treatment is required hygiene is always the "power behind the throne" of a cure. Among tonics may mention cod liver oil, creosote and guiacol. Nuclein either hypodermically in 5 per cent. solution or by stomach about four grammes daily. Can also use about 50 per cent. solution as intravenous injection. Ichthyol and ichthalbin administered internally have been highly lauded. Balsamics and alkalies to modify the urine and soothe the bladder. Urinary antiseptics are absolutely useless. Local treatments are contraindicated except when the case is well advanced and then use drugs which are best borne and give the most comfort irrespective of curative power. A solution in olive oil of a 25 per cent. to 100 per cent. guiacol valerinate or from 3 per cent. to 127. watery solution of thallin sulphate. Seem suggests trichlorid of iodin from 2 to 5 per cent. as well as the iodoform glycerine emulsion in about 10 per cent. strength. Perhaps the most soothing is a solution of bichloride of mercury from 1 to 5000 or even 1-25000 and next the guiacol valerinate solution; both are very healing, however, if nothing else gives relief the thallin solution will be very efficacious. Indications for operative interference are: (1) To relieve symptoms by establishing continuous drainage to allow the bladder to rest. (2) To cure the disease by topical applications. (3) To remove the diseased tissue by cautery, curette or knife. It is rarely possible to remove by knife all the diseased tissues since the primary focus is usually located in some other organ of the body and as the oldest lesions are, in most instances, located about the trigone where they can least well be excised of the parts involved. All must admit that operative failure entails dire results.

Maryland Medical Journal, August, 1907.

The War on Tuberculosis.—Dr. J. S. Fulton says with the knowledge that the seed of the disease is contained in the sputum of the tuberculous and with the means of destroying the sputum medical men should have been fully prepared if mere knowledge could have prepared them to undertake the prevention of tuberculosis in any household where the disease was found. Means of destroying infectious material have been known and used by physicians from time immemorial, and a belief in the infectiousness of tuberculous sputum can be traced to antiquity. The identification of tubercle bacillus simply confirmed the views held by a respectable minority of the medical men of preceding generations. But the indisputable proof which completed his knowledge did not bring it into practical exercise. We do not find that medical men in attendance on cases of tuberculosis advised that the sputum be destroyed. The significance of the facts must have literally stared at them. The physicians household was visited as often as any other by the lean specter; the physician himself was often attacked. But even in the narrow circle of his undivided mastery the physicians knowledge was not applied to its obvious use. Singularly sterile this knowledge must have been if neither conjugal love nor parental love nor the instinct of self preservation could vitilize it. The infirmity of our fathers which kept their knowledge barren may rob us of the fruits of far richer knowledge. We are just as infirm as our fathers, not toward this problem, perhaps, but toward some other problem which our children will solve, wondering why we, knowing enough, did not solve it in our day. A new faith must grow beside the seed of knowledge, and faith is like a grain of mustard seed, the least of all seeds. The medical men of 1880 did not believe in what they knew about tuberculosis. They neg-

lected the immediate and obvious utilityof the facts for the sake of their remote and indefinite promise.

The Texas Medical News, June, 1907.

Report of the Ninth Annual Meeting of the American Proctologic Society held at Atlantic City, N. J., June 3 and 4, 1907.

New Orleans Medical and Surgical Journal, August, 1907.

Treatment of Chronic Heart Disease.—Dr. J. B. Elliot gives the following: Given, a patient with dyspnea, edema, and even general anasarca, cyanosis, enlarged liver, albuminuria and in two weeks see the same patient walking about the wards in comfort makes the physician feel as if he did have some sphere of usefulness other than advising a patient to call in a surgeon. The treatment here is first and foremost rest absolute with bed pan and urinal, next purgation, and only lastly digitalis in medium doses. With these must be considered the important point of diet, a point frequently overlooked in the hurry to rush in all cardiac stimulants these patients complain more frequently of gastric distress than of any cardiac trouble. Few of our text books lay enough stress on this very practical and important point. The least amount of fermentation or dyspepsia will give bad days and torturing nights. Hard and fast rules cannot be laid down as to just the exact amount or kind of food to be used. The author has generally found that rare beef steak in small quantities, cold chicken almost raw, eggs, baked apples, toast, buttermilk or vichy and milk gives a varied enough diet. Liquids should be kept to a minimum and never during meals. Vegetables have little coloric value and take up too much space and time.

Having overcome your loss of compensation partly by purgation, rest, and digitalis then you can increase your digitalis and add caffein or strychnine and allow your patient more latitude, warning them frankly and full of the dangers of constipation, overexertion, or exposure. It is in this cardiac class that the Nauheim baths combined with the Schott exercises give brilliant results. Through the enterprise of one of our leading drug houses we are enabled now to give these baths in any private house in which a porcelain lined bath tub is available. In the over-fat cardiac patient especially does this therapeutic measure give good results. The author advises one to read "Treatment of Chronic Diseases of the Heart" by W. Bezly Thorne in order to find out how this combined method is carried out.

Virginia Medical Semi-Monthly, August 23, 1907.

Principles of Surgery, Lecture XXXIV, Tetanus and Hydrophobia—Synonyus, Definition, Cause, Varieties, Pathology, Symptoms, Diagnosis, Prognosis, Treatment.—By Dr. Stewart McGuire.

Importance of Early Recognition of Nasal Obstruction with Relation to Disease in Other Regions.—Dr. C. H. Knight believes that it is usually a simple matter to detect and fix the location of a nasal obstruction. With a suitable speculum, good illumination, a nasal probe and cocaine to retract the tissues it is possible to explore all parts of the nasal fossae. Subjective symptoms are not always reliable. In the majority of people the inspiratory air current describes an upward curve, passing through the middle meatus and over the middle turbinate. An obstacle in the inferior meatus, therefore, might not be betrayed in quiet respiration. In such cases stenosis is apt to be intermittent when the patient lies down or performs some violent exercise with forced breathing. The gravity of the condition is impressed upon us by recalling some of its remote sequels. Deformity of the chest wall, pigeon breast, was long ago attributed by Dupugtren to labored respiration, due to atresia of the nose. Asthma and bronchial disorders are often recognized while many in the long list of reflex neuroses must be regarded as having their origin in the fancy of the observer rather than in fact. Ocular disturbances from compression of the nasal duct and aural derangements from occlusion of the Eustachian tube are familiar. The impression made on the physiognomy is well known and is certainly not a trivial matter. The so-called "adenoid facies" which is by no means exclusively associated with lymphoid hyperplasia in the vault of the pharynx needs no description. Finally mental lethargy or aprosexia is often so pronounced as to draw serious attention to the question of nasal obstruction. It is true that an acute process tends to be limited by anatomical boundaries or to advance slowly if at all. In the oropharynx at the posterior commissure of the larynx and over the vocal bands squamous epithelium replaces the ciliated form present elsewhere in the upper air tract and seems to offer more or less of a barrier to invasion of these regions. In a chronic condition with permanent alteration of the membranes the situation is somewhat different. A remarkable example of this law is seen in atrophic rhinitis when the atrophic process gradually progresses to the pharynx, the larynx, and even the trachea.

The Southern Practitioner, August, 1907.

Gonorrhoeal Rheumatism.—Dr. W. T. Mare says that the correct treatment depends in some measure upon whatever that attack partakes of the uature of the acute or the subacute. It is necessary in both types to give anodynes to assuage the suffering. If the joint is hot and feverish hot moist cloths may do good, and dry superheated air is worth trying. These things will amuse the patient and help occupy his mind. Guiacol, menthol, aconite, and other remedies are useful as local applications, but systemic medication is usually necessary in order to relieve the intense pain and to produce mental tranquility. The urethritis should have thorough treatment. Copious and frequent irrigations with hot water as hot as can be borne is good treatment. Any mild and non-irritating antiseptic may be added to the water. When the rheumatism has a certain element or chronicity about it and the urethral discharge has ceased the physician may be easily mislead. In such cases we will usually find the prostatic urethra a hot bed of gonococci.

In addition to irrigations the dilitation with large cold sounds is very useful. Dilitation of the anal sphincter has been known to effect a cure in some cases. Chronic cases are benefited by a circle of fly blisters and the persistent use of the continuous current. Absolute rest must be enjoined in this disease and the pains mitigated. Strong cathartics and depletive remedies should not be employed. Sedation and not stimulation is required. The primary lesion should always be looked to. In other words if there is a gonorrhoea active or latent it should be treated.

Book Notices.

The Principles and Practice of Modern Surgery. By Roswell Park, M. D., Professor of Surgery in the University of Buffalo, Buffalo, N. Y. In one very handsome imperial octavo volume of 1072 pages, with 722 engravings and 60 full-page plates in colors and monochrome. Cloth, $7.00, net; leather, $8.00, net. Lea Brothers & Co., Philadelphia and New York, 1907.

The sign of a great and growing subject is found in its literature, the measure of its activity and growth. This is particularly applicable to surgery, endless and unresting in its advance and possibilities. However, no justification is necessary in the case of a work from the pen of so eminent and mature a surgeon as Professor Park. He is peculiarly qualified upon both main divisions, as always an enthusiastic worker in surgical pathology, and as an equally resourceful and successful practitioner of the art. Thus he has been able to produce a book which is well balanced, complete, and with all its information well interrelated. His skill as a teacher of the first rank is manifest in his orderly arrangement and clear exposition. Accordingly his work possesses a wide range of importance, for it affords the student a logical training, thereby minimizing the labor both for him and his teacher, and serves the general practitioner and surgeon equally as well as an authoritative guide in the most directly responsible branch of all professional work.

This new individual book is the successor of the Surgery by American Authors edited by Professor Park, which ran through three editions. His collaborators therein have most willingly placed their work and accompanying illustrations at his service. As Professor Park is equally at home in the surgical literature in English, German and French, the three languages to which everything in the civilized world must come for dissemination, his Modern Surgery may be trusted as an authoritative exposition of the world's most advanced views and practice at the present time.

A Text-Book of Practical Diagnosis. The Use of Symptoms in the Diagnosis of Disease. By Hobart Amory Hare, M.D., Professor of Therapeutics in the Jefferson Medical College of Philadelphia. New (6th) edition, thoroughly revised and rewritten. Octavo, 616 pages, with 203 engravings and 16 full-page plates. Cloth, $4.50, net; leather, $5.50, net. Lea Brothers & Co., Philadelphia and New York, 1907.

Professor Hare is as resourceful in his literary methods as in practice, and in his *Diagnosis* he has produced a work which must have taxed his ingenuity and industry, but he has made a straight and smooth path for his readers. That they have been prompt and steadfast in appreciation is shown by the call for six editions.

The plan of the work is exactly the reverse of the usual book on Diagnosis, which analyzes diseases into symptoms and requires the reader to recombine them when meeting a case. Dr. Hare's method might be termed the natural way, as he approaches his subject as the phvsician must approach his patient, namely, *symptoms first*, and upbuilds his diagnosis on these units. Thus the discovery of any marked symptom, such as vomiting, leads the reader to the point where its diagnostic significance is discussed and the differentiation of the various

conditions in which it may occur. The whole field is covered in this convenient way. Instructive and typical engravings and plates are liberally employed. The revision for this new edition has been most thorough, bringing the volume well up to the latest knowledge.

As indicating the popularity of Professor Hare's works, it is worthy of note that within the past few months have appeared this sixth edition of his *Diagnosis*, the twelfth edition of his *Therapeutics*, and the second of his *Practice*, the last named having run through two very large printings of its first edition and into the second in two years. Such a record would be difficult to parallel.

A Manual of Hygiene and Sanitation. By Seneca Egbert, M. D., Professor of Hygiene in the Medico-Chirurgical College, Philadelphia. New (4th) edition, thoroughly revised. 12mo, 498 pages, with 93 illustrations. Cloth, $2.25, net. Lea Brothers & Co., Philadelphia and New York, 1907.

Professor Egbert has presented in this convenient and moderate-sized volume the essentials of Hygiene and Sanitation, subjects of the most far-reaching importance. His long experience as a teacher is conspicuous in the clear, well-arranged and well-assorted knowledge conveyed in his pages.

The book enjoys a high position as a text-book and equally serves the practitioner for quick reference. Its popularity is shown in the number of its editions, each of which has been brought thoroughly abreast of the subject at the date of issue, a statement fully applicable to this new revision fresh from the press.

Satan Sanderson. By Hallie Ermivie Rives. Illustrations by A. B. Wenzell. The Bobbs-Merrill Company, Indianapolis.

Two young men of astonishing similarity of feature and dissimilarity of character are pictured in these pages. Hugh Stires is the profligate son of a fond but censuring father, and "Satan Sanderson," otherwise the Reverend Harry Sanderson, the one-time friend of Hugh but now a reformed character. They both love the same girl, who is blind, and though Hugh wins her, on their wedding day it is discovered that he is a defaulter and his father forbids him ever seeing her again. Hugh Stires is in bitter need of money, and the Reverend Harry Sanderson for the love he bears the blind girl gambles with him at the very altar of the church. The stakes are one gold piece of Sanderson's against one good day to be lived by Stires. They are discovered by no one less than the Bishop himself, who, of course, does not understand the situation and sees nothing but the damning evidence before him of cards, dice, and money. From there on the story winds around devious paths until it finally ends in a happy denouement.

The illustrations are beautifully executed by a well-known artist and the publishers have made the volume very attractive in appearance.

The British City. The Beginning of Democracy. By Frederick C. Howe, Ph.D. Chas. Scribner's Sons, New York. 1907. Price, $1.50.

The author shows a most profound knowledge of his subject. He has given a frank and open discussion of economic conditions existing in English towns. His analysis of the evils which underlie the British municipal governments is most illuminating. Some of the chapters are as follows: "The Municipality and Labour"; "The American and British City—A Comparison"; The Dead Hand of the Land"; "The British Parliament—The Sanctuary of Privilege"; "The Upper and the Nether Millstones of Privilege," &c.

The subject is presented in a clear, concise style which holds the reader's attention.

International Clinics. A Quarterly of Illustrated Clinical Lectures on Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other topics of interest to students and practitioners. By leading members of the medical profession throughout the world. Volume III. Seventeenth Series, 1907. Edited by W. T. Longcope, M. D. J. B. Lippincott Company. Philadelphia and London.

This volume is full of valuable and interesting information. The papers are unusually good.

Human Anatomy. Including Structure and Development and Practical Considerations. Edited by Geo. A. Piersol, M.D., Sc.D. J. B. Lippincott Company, Philadelphia and London.

This work represents a comprehensive and concise description of the essential facts of human anatomy by authorities of the very highest order. It includes all that is necessary to a thorough understanding not only of the gross appearances and relations of the various parts of the human body, but also of their structure and development. Dr. Thos. Dwight, Parkman Professor of Anatomy in Harvard University, has written the description of the skeleton, including the joints, and that of the gastro-pul-

monary system and of the accessory organs of nutrition.

Dr. Carl A. Hamann, Professor of Anatomy in Western Reserve University, has contributed the account of the cerebro-spinal and sympathetic nerves. Dr. J. Playfair McMurrich, Professor of Anatomy in the University of Michigan, has supplied the systematic description of the muscular and of the blood- and lymph-vascular system. Dr. Geo. A. Piersol, Professor of Anatomy in the University of Pennsylvania, has written the introductory, histological and embryological paragraphs throughout the work and contributed the description of the central nervous system, including the deep relations of the cranial nerves, of the organs of special sense, and of the uro-genital system.

A most useful and important feature is a consideration of the practical applications of anatomy contributed by Dr. J. Wm. White, Professor of Surgery in the University of Pennsylvania. He presents with unusual force the relations of anatomy to the requirements of the practitioner and student.

The text is most profusely and beautifully illustrated, largely by original drawings made from most excellent dissections. It is impossible to say too much in praise of this book. No work on anatomy surpasses it.

Abstracts of the Leading articles of the month.

Concerning Persistent Priapism.—Terrier and Dujarier (Revue de Chirurgie) report a case of persistent priapism which came under their observation at La Pitie during May, 1906. They give a review of the literature, collecting 48 cases, including their own. Of these 48 cases, thirty-one recovered spontaneously. Five died of leukemia. Two died with the priapism unrelieved, one of suppurative phlebitis, one of a fractured spine. Operation was done in ten cases, all cured. In the case reported, syphilis and gonorrhœa were absent. Three years previous the patient, 30 years of age, an acrobat, fell 50 feet and received a "complicated" fracture of the left thigh requiring amputation. No spinal symptom. Patient entered hospital May 19th, 1906. On the night of May 14th, patient had intercourse six times. After this nothing abnormal until May 17th when patient awoke at 3 o'clock in the morning with an erection. This was persistent, but not painful, until ten o'clock. No urethral discharge, but persistent and painful erection. At 5 p. m., patient came to hospital. On examination the erection appeared to be restricted to the corpora cavernosa, the corpus spongiosum being flaccid. Palpation showed fluctuation with great tension in both corpora cavernosa. Testicles and scrotum normal. Some spasm of sphincter ani, vesicles and prostate normal. The erection persisted both day and night and the pain required morphine injections for relief. No evidence of a lesion of central nervous system. No leukemia. On the 21st temperature reached 100 F. A general bath afforded no relief. On the 24th it was necessary to catheterize the patient. On the 26th the tumefaction was greatest in the right corpus, and the penis inclined to the left. The retention, however, ceased and the patient noticed some pus at the meatus. The urethritis was probably due to the use of the catheter. It was not specific on the 27th; the pain was less severe and the penis had diminished in volume. The pain and swelling returned the following day and June 1st M. Terrier operated. An incision was made into the side of the right corpus, 2 cm. in length, which gave vent to thick blood of the color of treacle, viscid, but without any clots. By squeezing both corpora cavernosa, they were emptied of a great quantity of dark viscid blood. A second incision was made in left corpus, with similar results. The penis now became flaccid. The corpora cavernosa were sutured with catgut; the skin with horse hair. Cultures taken from the expressed blood showed colon bacilli subsequently. Some wound infection followed and the wounds were drained. The patient left the hospital July 2nd, but returned on the 12th with a swelling at the base of the penis. A sound introduced into the sinus, which remained, was followed on its withdrawal by a large quantity of pus, the cavity extending to the root of the right corpus.

Patient left hospital, the second time, the 19th of August. At this time there had been a few erections, but no ejaculations.

The authors state that the causes of persistent priapism may be classified as follows: nervous, traumatic, inflammatory, leukemic and idiopathic. Two of the 48 cases cited belonged to the first type, one occurring in a patient with paraplegia from fracture of cervical spine, and one in a patient with "cerebro-medullary" syphilis. The authors remark, however, that the fact that persistent priapism does not yield to chloroform is a sufficient proof that, as a rule, the nervous origin of the disease cannot be accepted. In two cases of the series, priapism followed injury to the perineum, one from a fall, the other from a kick. Hæmatoma of the corpus cavernosa was found compressing the urethra.

With one exception the priapism, which is the result of specific infections, is transient.

The authors make a distinction between "penitis," "cavernitis," and persistent priapism.

Leukemia in sixteen out of the 48 cases was found to be the cause of the priapism.

Of unknown (idiopathic) origin were twenty of the 48 cases.

All those writers who have opened the corpora cavernosa in patients with priapism have failed to find thrombosis, but have observed that the cavernosa tissues were distended with thick syrupy blood rarely mingled with little clots.

The authors state that these cases of persistent priapism, as a rule, recover, but that their recovery is more prompt and complete, particularly as to function, when operated than when allowed to recover spontaneously, an affair which is a matter of weeks and months.

Thoracic Aneurism.—Oliver (British Medical Journal) says in regard to the treatment of thoracic aneurism that rest in bed and quietude are essential, accompanied by a restricted diet. Cases of thoracic aneurism unaccompanied by aortic incompetence are more amenable to treatment than those arising just above the aortic orifice and accompanied by aortic regurgitation, for in these there cannot be that calmness in the interior of the sac which is necessary for coagulation of the blood. The administration of iodide of potassium gives on the whole the best results. Pain and paroxysmal dyspnea are frequently relieved by it. The author has administered to some of his patients as much as 450 grains of potassium iodide per diem, but there is nothing to be gained by giving such large doses. In some instances the results will not be so satisfactory, for when pushed beyond a certain limit potassium iodide lowers the blood-pressure and so quickens the action of the heart that the circulation in the aneurism is too excited for the deposition of clot to occur. Since calcium salts are known to favor coagulation of the blood he has administered these in various forms, but without obtaining results as satisfactory as those from potassium iodide alone. Even with this potassium salt there are few real cures of thoracic aneurism, although great relief is obtained. While in distal aneurisms spontaneous clotting of blood may occur that leads to cure, this, owing to the situation, is very seldom the case in thoracic aneurisms.

The author has had no experience in carrying silver wire into the interior of an aneurism, nor of needling. Several cases of aneurism he has treated by the subcutaneous injection of gelatin into the tissues in the neighborhood of the sac. Some of the patients complained of great pain in the part afterward, while in others there was always a slight rise of temperature and considerable discomfort. In a few of the patients thus treated the pulsations of the aneurism became less marked and the tumor became harder and shrunk. Several of the patients left the infirmary much better, but the cure was never complete, for in some of them the sac ruptured weeks or months afterward. Apart from the pain which the subcutaneous injection of gelatin causes there is another risk that has to be borne in mind. Tetanus followed gelatin injections in one of the London hospitals, and as it is extremely difficult to sterilize gelatin, this risk, although no doubt remote, must be borne in mind.

The author has had a limited experience with galvanopuncture; he has seen one case of subclavian aneurism thus treated, and in which for several months the result was satisfactory until, after friction caused by the workman carrying his spade on the affected shoulder, the aneurism redeveloped and burst into the surrounding tissues, causing a hematoma which began to ooze through the skin, but in which the blood subsequently coagulated, and the aneurism was finally removed.

One of the difficulties of treating thoracic aneurism is in getting the subjects of the disease to be patient under treatment. Rest in bed and the restricted diet in time become irksome to the patients, who, once they feel rather better, long for freedom. If when the pulsation of the tumor has lessened and the sac has become smaller and harder, patients can be got still to carry out the rest cure, the results are, as might be expected, more satisfactory.

Spinal Analgesia in One Hundred Cases.—Barker (British Medical Journal) notes that spinal analgesia has been shown to be generally applicable only to the lower half of the body, though some few use it for operation on the thorax or even higher. He has employed stovaine in all of his one hundred cases, and notes that no drug yet employed has so far given as absolute uniform results as to the effects, the site affected by the analgesia, and the complete absence of by-effects which led to the misuse of cocaine in this field. The waywardness which has been occasionally seen by all operators has manifested itself in various ways: First, it has been noted that even where lumbar injection has been accomplished to all appearances correctly no effect whatever has followed the injection. Second, where analgesia has been more or less produced it has

been found in a few of the earlier cases to affect a region other than that required for operation, nor have these disconcerting results been fully explained. Finally, it is known that in a large series of cases injected with the same amount of the same drug no by-effects may be seen, and then two or three cases may be troubled with a considerable sickness or a headache.

Barker believes that when no effect follows the injection it is due to the fact that the needle has only partially entered the dura, the injection not entering the sac at all or only partially.

The technical problem lies in entering the lumbar dural sac with the needle and discharging all the contents of the drug directly into the cerebrospinal fluid below the termination of the cord. The spinal cord terminates at the lowest point opposite the first lumbar vertebra. The lumbar dural sac extends about as far as the third sacral vertebra. Below the third lumbar spine, however, an ordinary needle puncture would be extremely difficult, hence the second and third lumbar interspaces are chosen. Puncture in the middle line is the easiest, safest, and best course; also it is the least painful. Here the analgesic compound passes freely into the spinal fluid, and reaches both sides equally, and can move freely upward or downward from the point of entry. Afterward it can be influenced in various ways and for various objects according to its weight relatively to that of the spinal fluid. The fourth lumbar spine is recognized by being on a level with a line uniting the highest points of the two iliac crests across the back. The hollow needle is thrust in just above this or in the third spinal space, and is aimed straight forward and a little upward. In some very stout people it is often difficult to find the spine with the finger, and the point of the needle may strike bone. Its upward slant is then varied, and this will usually be sufficient for success without a fresh puncture if the back has been well rounded so as to obtain the greatest amount of separation between the spines. In powerful, middle-aged men where the spines are clubbed or twisted at their ends or even overlapped, there may be complete failure to reach the sac. Three of such cases were found in the author's series of 100. The needle employed has a close-fitting stylet and a hollow point so as to give sharpness without lengthening the terminal opening too much, the object of this being to enable the whole of the open end of the needle to lie within the dura without the point being pushed so far as to wound any of the structures within the sac. The hollow needle armed with its stylet is thrust through the skin sharply and pushed for about an inch in the direction given, when the stylet is withdrawn. The needle is then pushed on steadily, and as a rule easily. After it has passed the supraspinous and interspinous ligaments very little resistance is felt; it is rather as though it were crossing an empty space. Finally there is a sensation of having punctured a tense membrane, and the spinal fluid flows out in rapid drops, or, more rarely, in a continuous stream. If the drops come very slowly the needle may turn round a little on its axis, when they will usually come more rapidly. In no case should the analgesic compound be injected unless the fluid runs satisfactorily. When about 10 cubic centimeters of liquor spinalis has run off into a measure-glass the slender cannula attached to the syringe is inserted and pushed home, and the previously measured compound is delivered into the sac by a slow thrust of the piston. The patient is then rolled over on the back and the pelvis is raised a little.

Tuberculous Disease of the Spine in Children.—Elgood (Brit. Jour. Children's Diseases) writes this thesis on the basis of 28 cases of spinal disease in children under her care. She gives two pathological types: (a) the localized soft caseous deposit, or the sequestrum, in the interior of the bone; (b) the primary superficial caries. The first is the commoner in children. The disease starts in the body of the vertebra and spreads toward the surface. This necessitates a certain amount of bone destruction, and the weight of the bodies above, pressing upon the softened bone below, produces a tilting backward of the spine of the uppermost diseased vertebra and causes the typical angular curvature.

On reaching the surface the disease may produce: (a) a secondary superficial caries, destroying parts of the intervertebral discs; (b) or a localized abscess may form, surrounding the spot where the caseous deposit has reached the surface.

When treatment effects a cure the inflammatory tissue organizes into fibrous tissue and then into bone.

Etiology.—Elgood considers hip disease commoner in children than spinal caries. The tendency for the spinal form to follow injury is less than in hip disease. Spinal caries is commoner in boys than girls, whose resistive power to the bacterial invasions of bones seems to be greater than that of boys.

Clinical Signs and Diagnosis.—Classification: (1) early cases before curvature, only diagnosed by the presence of rigidity of the spine; (2) cases with spinal deformity, but without complication; (3) cases with or without deformity, but with complication (a) abscess; (b) some concomitant

tuberculous trouble; (c) sepsis; (d) compression of spinal cord. In the first class, determining the opsonic index may help to make a diagnosis, an index above 1.2 and below .8 indicating tuberculous disease. Rickets and hysteria may sometimes be mistaken for this disease.

Class II is the commonest. The curvature is most frequent in the lower dorsal region, next in the upper dorsal and lower cervical, but is rare in the upper cervical and lumbar regions.

Class III. (a) Localized abscess pointing over the seat of disease is common in children. (b) Some concomitant tuberculous lesion. The usual site is in the lungs, and the pulmonary condition may be independent of, or secondary to, the spinal disease. The next commonest seat is in the glands, where the infection may be secondary, through the blood, or direct, from the primary focus. Concomitant bone and joint infections often occur, the commonest site being the hip. Sepsis accompanying tuberculosis is an important agent in maintaining and spreading the disease. Pressure on the spinal cord causes paraplegia, of which caries is the commonest cause in children. It may be the first sign to appear.

Treatment.—(a) By conservative methods. (b) By operative procedures (1) partial, simply to remove pus; (2) radical, to remove the disease; (3) in the later stages, to remove deformity. (c) Vaccine treatment. Conservative treatment consists mainly of rest and immobilization. The patient is kept supine six weeks after the last complaint of pain. Then a Sayre's plaster jacket is applied. Operation for removal of tuberculous pus must be done under the strictest asepsis, as these wounds heal with difficulty. The radical operation for removal of the disease is that of laminectomy, a dangerous and generally unjustifiable procedure. Vaccine treatment—Elgood recommends the use, in some cases, of tuberculous opsonins, according to Wright's method, sometimes combined with mild surgical measures.

Open-Air Treatment of Pneumonia.—Rennie (Brit. Med. Jour.) states that the two main points in treatment are, first, to maintain heart action against the depressing effects of the toxins of the pneumococcus, and, second, to prevent imperfect areation of the blood. He believes that these two indications are most effectively met by the adoption of the open-air method. His hospital plan of treatment (New South Wales) is to place the patients on the balcony or veranda of the hospital, where they are kept night and day. A screen is placed around the head of the bed to keep the cold winds from blowing directly on the patient. Of the cases thus treated, in all about twenty in number, only one has proved fatal, and that was an old man over sixty years of age, who was admitted practically moribund, with extensive consolidation, much cyanosis, and a very feeble pulse. He died within a very few hours after admission. In no case has the open-air plan seemed to give any unfavorable results, but rather has seemed to have a beneficial effect on all the symptoms. The temperature has never risen above 103.8 degrees, and no antipyretic treatment has been necessary. In most of the cases the temperature dropped and the crisis occurred in two to three days. In no case so far has the crisis occurred later than week from the onset of the disease as estimated by the initial rigor. The author does not wish to be understood to claim that this line of treatment has any special effect on shortening the duration of the disease; he merely states what has been his experience. An investigation of a much larger number of cases treated by various methods would be necessary to enable one to decide whether the disease is really shortened or not by open-air treatment. As regards the pulse, an almost immediate effect was noted in the way of improvement, and in only a very few instances was any cardiac stimulant, such as strychnine or digitalis, needed. No alcohol has been given. The tongue began to get moist and to clean rapidly, and the appetite was much improved; the patients were always ready for their milk. Sedatives have not been required except in one or two instances where there was some delirium at first, but not more than one dose has been requisite. As a rule sleep became at once quiet and refreshing. Cyanosis also rapidly disappeared.

Causes of Backwardness in School Children.—Schlesinger (Archiv. f. Kinderheilkunde) has made a special study of 138 children in the special school at Strasburg for children who are unable to keep up with the lowest classes in the grammar schools. He finds by study of the individual cases that the defective condition is, as a rule, the result of injurious influences acting on a central nervous system already suffering from an inherited weakness. The most serious conditions are observed in children in whom several of these injurious influences had co-operated, even when the hereditary taint was slight. His statistics show that these backward children form 1.1 per cent. of the total number of school children, and that boys are in the majority. In 13 cases there had been severe injuries of the head; in 28, convulsions in infancy, epilepsy, chorea or infantile paralysis, and in 20,

severe headaches. Drunkenness in the parents was noted in only 30 cases; long sickness during infancy in 52, and exclusively artificial feeding in 55, measles in 76, whooping-cough in 40, diphtheria in 22, and scarlet fever in 10. He urges that these backward children should be given more opportunities for bathing, free meals, country schools, etc. They should have the benefit of everything of the kind, and the medical inspector of a school for backward children should be empowered to watch over the children and to treat them as occasion arises if he finds that the parents do not follow his recommendations in regard to medical advice. As these children are generally of the class in which the parents are unable to pay for a physician's care of the children, no one will lose pecuniarily by such a course, while the children would benefit immeasurably by constant medical oversight and treatment as indicated.

Tuberculin Suppositories.—Lissauer (Deutsche medizinische Wochenschrift) maintains that, although the real value of the tuberculin treatment in tuberculosis is still uncertain, its administration by way of suppositories has several advantages and gives the same results as other methods of administration. The suppository is inserted after a movement or after a cleansing rectal irrigation, no aseptic precautions being necessary, while when it is given hypodermically the skin has to be carefully cleansed, and even then there is usually some local reaction. After a suppository has been given there is no fear of any infection, and a local reaction is rare, and when present manifests itself only by slight burning about the anus or a mild diarrhea. The action of tuberculin is more certain when given in suppositories than when given by inhalation or by mouth. The patients on which Lissauer tried the suppository treatment were usually advanced cases of tuberculosis with a poor diagnosis. Koch's "Alt-tuberculin" was used and, as is the case with most drugs administered by rectum, somewhat larger doses of tuberculin were used than when it was given by mouth or hypodermically; the amounts were usually fractions of a milligram. The drug was given daily or every few days or at weekly intervals, depending upon the case. In patients which reacted the usual symptoms which follow the administration of tuberculin set in; their mode of onset, however, was slower and milder, hence suppositories can be safely given in far advanced cases in which severe, sudden reactions are undesirable and in which a propagation of the process would be caused by hyyodermatic injections of tuberculin. Hemoptyses and skin eruptions were noticed several times after the use of suppositories. As a further proof that tuberculin causes a reaction in the lung tissue itself, he mentions patients with anthracotic lungs, in whom the sputum, which had been yellow, now became black, showing that changes were going on in the lung. As regards the therapeutic value of tuberculin, he admits that some patients were not benefited and that others might have gotten well without it, but firmly believes that loss of disagreeable subjective symptoms, an increase in body weight, and an improvement of the local lung condition could at times be attributed to tuberculin alone.

Hysterical Sweating.—Curschmann (Munchener medizinische Wochenschrift) relates the history of two cases in which regular, spontaneous, recurrent attacks of sweating occurred and which were not caused by emotions or exercise; they came on at a time of mental and bodily rest, but not during sleep. The first patient was fifty-seven years old and claimed to have had influenza each year for twenty years; these attacks consisted only of headache, weakness, and recurrent sweats. Curschmann saw her in one of these so-called attacks of grippe, which lasted four months, and during which she perspired profusely three times a day; she had no fever, no loss of appetite, and gained in weight; the patient said she had to perspire or else she would feel sick. The second patient he observed was the daughter of the first, and had been subject to similar yearly influenza attacks for ten years. Electric baths and suggestion cured both. Their nervous system revealed no organic changes and hysterical stigmata were absent, and yet Curschmann believes the condition to have been nothing else than hysterical sweats, far different than the one we see in neurasthenic persons who get a hyperhidrosis of the hands at the moment they fear to get it, i.e., when they shake hands with other people.

Gastric Juice in the Fasting Stomach.—Gentzen (Deutsche medizinische Wochenschrift) carried out a series of experiments to prove that the normal fasting stomach contained gastric juice. For this purpose he employed Sahli's desmoid reaction. A desmoid pill containing methylene blue and closed with catgut was given to persons whose gastric secretion had previously been shown to be normal after the ingestion of a test meal. The pills were swallowed in the morning when the stomach was empty, not even a drop of water being given with them. In thirty-three out of fifty-three persons methylene blue was found

in the urine in less than two hours after the ingestion of the pill, in fifteen in two to three hours, in two in four hours, and in three in six to seven hours. In other words, the catgut had been digested, the contents of the pill had been poured out, and since the acid gastric juice is required to digest the catgut it must be normally present in the fasting stomach. Gentzen then refutes the objections advanced to his conclusion by various observers: (1) that the secretion of gastric juice was caused by the mechanical irritation of the pill; this he believes has been proven to be impossible by Pawlow's experiments in which he showed that mechanical irritation of the gastric mucosa does not cause any flow of gastric juice; (2) the claim that the catgut was dissolved in the intestine he proves to be untrue by first showing that the gastric juice of rabbits can dissolve catgut just as human gastric juice does. Then he inserted one desmoid pill into the upper portion of the duodenum of five rabbits and one into the lower portion of the duodenum of another rabbit. Two out of the five rabbits showed methylene blue in the urine in five hours, the rabbits in which the pill was inserted into the lower portion of the duodenum passed the pill *in toto*. In the latter case the reaction of the duodenal secretion had been tested and found to be alkaline. He thought the digestion of the catgut in the first two rabbits might have been caused by gastric juice which entered the duodenum; to exclude this possibility he repeated his experiments after having first ligated the pylorus. The animals died after sixteen hours and up to that time no methylene blue had been found in the urine. At autopsy the pill was found *in toto* in the duodenum. He likewise found that when keratin-coated desmoid pills were swallowed by persons they were found in the feces intact, but with the keratin dissolved. All these experiments showed that the catgut is not digested in the intestine and that methylene blue found in the urine within six hours after the ingestion of the desmoid pill must have been caused by the digestion of the catgut in the stomach; in other words, the human fasting stomach always contains some gastric juice.

Gonorrheal Epididymitis and its Treatment.—Barmann (British Medical Journal) reviews the opinions held with regard to the pathogenesis of gonorrheal epididymitis, and in spite of the work of Eraud and others finds that there is every reason to refuse suggestion that the so-called orchiococcus is the responsible microorganism, but that there is little doubt that the gonococcus acts locally, causing the change in the epididymis. The path of infection is probably the mucous membrane, and in support of this view he finds that the vas deferens is more commonly thickened than is usually supposed; that the epididymitis is frequently ushered in by a vesiculitis, involving the corresponding half of the prostate, as well as a deferenitis; that the post-mortem changes in certain cases are analogous to the strictures of the urethra; and lastly, because the gonococcus is more or less a mucous membrane parasite. He has studied the question closely in a series of cases, and has sought for the gonococcus by puncturing the epididymis. The cases included some with more or less wide-spread abscess formation, and with inflammatory hydrocele.

From his experiments the author came to the conclusions that every epididymitis which occurs in the course of gonorrhea is due to a local invasion of the gonococcus, and this microorganism can be cultured from the fluid gained by puncture; that in the overwhelming majority of cases a hitherto undiagnosable abscess formation takes place rapidly—this suppuration represents either congestion or pseudo-abscess, or it may be explained as a pure suppuration caused by the cocci. In the former case the wall of the vas epididymis undergoes secondary degeneration. In the cases complicated with abscess there is always some hydrocele, which is due to the infection of the tunica vaginalis by gonococci; further, that under certain conditions gonococci can be found in the remains of epididymitic infiltration years after the acute attack; that epididymitis which is due to or rather follows non-gonorrheic urethritis is caused by the invasion of the local tissues by the same microorganism causing the urethritis; that early puncture of an acutely inflamed epididymis is to be recommended, since by this means pseudo-abscesses or abscesses situated in the connective tissue may be evacuated, and the vas epididymis may be protected from being implicated in the destructive process; and lastly, that puncture of the hydrocele is also to be recommended on the ground that the disturbed conditions of the circulation are improved, and the chances of resorption are thus favored.

The Resorptive Power of Joints.—Hildebrand (Archiv fur klinische Chirurgie) states that the researches of Braun have shown the incorrectness of the opinion that the inner lining of the joints is an endothelium like that of the large serous cavities.

The synovial membrane is not lined with endothelium, but with a tissue resembling the cornea, and perforated by connective

tissue spaces, which communicate with the interior of the joint and take the place of the stomata of serous membranes. These communicate with large spaces in the looser tissue below. The inner layer of the membrane is supplied by a dense network of blood-vessels and nerves, the latter showing many corpuscles of Vater, which are sympathetic sensory endings. The cartilage is also rich in blood-vessels. Whereas the fluid of serous cavities is derived from the blood plasma, that of the joints shows large amounts of mucin, which gives it a viscid character. There are no special cells to secrete this substance, but it appears that the cells of the synovial membrane are especially prone to degeneration, and where there is not much pressure this takes the mucoid form. Where there is joint pressure they form cartilage. The fluid also contains cell detritus from breaking down of the superficial layers. The amount of plasma is quite small, and is lessened by use of the joint, which is therefore not irritating to the surfaces, under normal conditions. In spite of the free blood and lymph supply, the absorptive power of joints is not as great as that of serosa. Fluids injected into the joints are absorbed fairly rapidly, but any solid particles, no matter how finely divided, are not taken up for a long time, or even not at all. Absorption is more rapid if the synovial membrane is incised. Effusion into the joint is caused by any irritant which acts upon the membrane, and in cases with chronic effusion into the joint there seems to be an increased irritability which induces an effusion even from the slight excitation caused by use of the joint. The rational treatment would therefore be the reduction of this irritability, and it is probable that the various substances which are used by injection into the joints act in this way. The mucoid synovial fluid should first be removed by washing with sterile salt solution, and the membrane treated with tincture of iodine or carbolic acid. This destroys the superficial layer of the membrane, and the newly-formed surface will probably not be irritable. Concentrated carbolic acid is preferred by Hildebrand, on account of its anesthetic and astringent properties.

Tuberculosis of the Bladder and Kidneys.—Kuemmel (Archiv fur klinische Chirurgie) believes that even when the bladder is infected before the kidneys, infection of the latter occurs through the blood.

He states that he has never seen a case of vesical tuberculosis without lesion of the kidney. It is not probable that the second kidney can be infected through the ureter, after the bladder is infected by the first. The condition demands early operation. "Early" means before local symptoms have appeared, and before there is disease of the ureter or bladder. Infection of the bladder will often heal spontaneously after removal of the diseased kidney, and it should never be treated operatively. In most cases the first symptoms are vesical, and examination shows only turbid urine, in which by careful study bacilli are always found. Every cystitis which does not depend on gonorrhea or catheterism is suggestive of tuberculosis. In cases of long-standing gonorrheal cystitis the bacilli should be sought, as gonorrheal infection predisposes to tuberculosis. In many cases in women the trouble is ascribed to the pelvic organs instead of the bladder. Cachectic symptoms are more prominent than local ones. In doubtful cases the ureters should be catheterized, as cystoscopy will not always show which side is affected. Administration of indigo-carmine will show clearly the orifice of the ureter. If the bladder is first washed out, there is no danger of infecting the sound kidney.

The only surgeons who object to catheterization of the ureters are those who have not mastered the technique. Tubercular urine is generally pale and clear or slightly turbid. In case the bladder is badly diseased ureteral catheterization may be difficult or impossible. In these cases the question of the function of the better organ may be decided from the freezing point of the blood, which is reduced in bilateral disease. If it is normal, nephrectomy of the diseased organ may be undertaken safely. In cases in which the propriety of operating seemed doubtful, the most diseased kidney was exposed, split, and fastened in the wound. In this way the action of the two kidneys could be studied. When the ureter was much diseased it was removed, or if only the upper end seemed to be affected, this was resected and a galvano-cautery inserted in the stump, heated to white heat, and withdrawn. A strip of gauze is laid in the wound, which is almost closed. The prognosis of the operation in early cases is entirely favorable. The deaths after the operation are almost entirely dependent on progression of lesions in other parts of the body. The recent operative mortality is less than three per cent.

Effect of Diet on the Uterus.—Campbell (British Medical Journal) details the results of some experimental studies conducted by himself with a view to determining the effects of diet, if any, on the development and structure of the uterus. From an examination of a series of eighty-six animals,

he finds that in animals of the same size and approximately the same weight, living under similar conditions, the uteri may vary within a limited range in size and development. The muscular coat is relatively uniform. The mucosa shows the greatest variations. While in most cases the epithelium lining the cavity is columnar, in some it is cubical; there are also found marked variations as to the position of the nucleus and its staining reactions.

In animals fed on albuminoid diet there is found a relatively constant departure from the normal. The type of change is common to all abnormal diets; its severity varies.

The severity of the changes induced are found to be in proportion to the ages of the animal at the time when the abnormal diet was begun. The changes are most marked in the animal put on the diet at weaning; they are less marked the more mature the animal at the time of the commencement of the abnormal diet. In a fully developed animal, any abnormal diet may fail to materially change either the size or structure of the uterus. The writer calls attention to the fact that a meat diet if begun at weaning almost invariably led to sterility and considers that this is due to structural developmental abnormalities in the uterus induced by the abnormal diet. He shows that the consumption of meat in England is seventeen times as great as it was in 1850. During the same period the fall in the birth rate has been most marked.

When to these facts is added the further fact that the decreased birth rate is among the better classes where means prevent of an unrestricted use of the expensive meats, the author thinks that the food factor in its relation to the birth rate is one worthy of serious consideration.

Treatment of Arteriosclerosis.—Colombo (La Riforma Medica) reviews the modern status of our knowledge of arteriosclerosis, pointing out that the later studies seem to show that the elevated blood pressure is rather a consequence or a concomitant phenomenon than a cause of arteriosclerosis. There are cases of this disease in which there is actually a lowered arterial pressure. The origin of the changes in the arteries, while not accurately known as yet, seems to be closely connected with gout and the uric acid diathesis. The latter is due to some form of intoxication of the blood, which is quite analogous to the poisoning with such metals as lead. In these poisonings the arteries assume the same changes which characterize them in cases of arteriosclerosis. Arteriosclerosis, therefore, is now regarded as a toxic condition, and in order to prevent it we must follow the advice of Metschnikoff, who tells us that we can avoid it by preventing the development of an excess of toxines in the alimentary tract. To prevent and to treat arteriosclerosis we must not only use such drugs as the iodides and the nitrites, but also must combat the intoxication in the blood and seek to eliminate the toxic products in every way possible. The skin, the kidneys, the lungs, and the intestines offer such ways. The perspiration is one of the most important portals for the elimination of the toxines in cases in which the kidneys are insufficient. The old idea that heat should not be used in arteriosclerosis has no practical foundation. Heat produces the dilatation of the vessels and secures the elimination of the toxines. The electric light bath for this reason is excellent in arteriosclerosis, the patient breathing fresh air while his skin perspires freely. The intestinal route can be utilized by the administration of such remedies as the saline mineral waters, every morning. A lacto-vegetarian diet with diminished chlorides is indicated in all cases of arteriosclerosis, and the patients must be cautioned to abstain from alcohol in any form. Tobacco is injurious and should be used sparingly. Moderate and systematic exercise without fatigue should be enforced. High frequency currents have been recommended, but in the author's experience they are not really beneficial. Cold foot baths, used several times a day, are recommended to those who suffer from cerebral congestions, vertigo, and headache. The water should be about 38 degrees C., and the bath should last from ten to fifteen minutes.

Pernicious Anemia.—Plehn (Berl. Klin. Woch.) asserts that the subject of pernicious anemia has been for many years one of the most discussed problems of pathology. Its etiology is today as obscure as it ever was. The conception of intestinal origin founded by Hunter and lately strongly emphasized by Grawitz, is deceiving, as the basis of it, the intestinal and gastric lesions, may be just as well a consequence as the cause of the disease. The paper of Plehn, cumulating in the establishment of two different classes of pernicious anemia, as well as single opinions brought out by discutants will not be reviewed here. They bring nothing new, nothing to come nearer the etiologic, biologic or organogenetic sides of the question. The most surprising feature of this paper and the discussion held on it is the uncertainty about the diagnostic side of the question. Long treatises were given on the value of the megaloblasts, and the fact brought out that megaloblasts have

been observed in cases that certainly were not pernicious anemia. In the whole discussion there was a wavering of opinion how the blood picture must be constructed to form that of pernicious anemia. The leucopenia, the relative lymphocytosis, were all made the objects of long speeches, while not a word was said about the basal peculiarity of the disease, the character of the red corpuscles. Ehrlich's classic work on the disease, that most likely was not all that was taken as it and named as such by Bierman, was only utilized in reference to megaloblastic forms, poikilocytosis and normoblasts. The main feature that forms the essential character of the blood in pernicious anemia, that represents in itself the disease without megaloblasts and other anomalies, and that at one glance at a specimen reveals the condition, is left out of discussion, although it represents the type that by Ehrlich was marked as pernicious anemia, the type that is separated from all other anemic conditions by it.

Without any prominent changes in the other anomalies, the red cells are always much larger in the average; they stain intensely, no anemic rings are seen in spite of the greatness of the anemia. They are not only larger in the average than the normal erythrocytes but they are not round; they are always more or less ovoid, or in other words show differences in length and breadth. The presence of this shape together with an intense staining capacity, alone establishes the pathologic condition. This character was Ehrlich's criterion in separating from other severe anemias a group, that by its course is identical almost in all cases. Otherwise the diagnosis of pernicious anemia would become a subject resembling the diagnosis of so many so-called typhoidal and malarial disturbances. If pernicious anemia is talked about as a pathologic unit, the red corpuscles decide the question. The post-mortem lesions of these real pernicious cases are always identical. Ehrlich's suggestion of a return to embryonic blood formation is very significant, as in fact, the corpuscles have all of the characteristics of the corpuscles up to the fifth month of fetal development.

A Diagnostic Symptom in Appendicitis.—One of the most important questions that arise in connection with the early diagnosis of appendicitis relates to the degree of participation of the peritoneal covering. During the last year and a half Blumber (Muench. med. Wochen.) believes himself to have noted a new symptom, the presence of which points to peritoneal involvement. In the typical case of early appendicitis, gentle pressure over the affected area produces pain which ceases as soon as the pressure is relaxed. When, however, instead of being gradually withdrawn, the hand that exerts the pressure is suddenly removed, the resilient tissues are thrown into more or less vibration and this in itself may produce a pain which the patient can nearly always clearly distinguish from the original pressure-pain. The writer believes that this pain, produced by the sudden removal of the palpating hand, is dependent upon the inflammatory involvement of the peritoneum. If it is more intense than the pain produced by the palpation of the appendix, the infection is probably progressing; if less intense the disease is retrogressing. The worst cases are those in which the symptom appears suddenly and with great intensity. The writer's experience is not based on a great mass of material but he requests that other clinicians give the method a trial.

Cummidge's Test for Pancreatic Disease.—Cummidge (Edin. Med. Jour.) in reply to Haldane who had denied this test any diagnostic significance, the writer replies, reiterating his claims for the test and giving a new and improved modification. The importance of the whole question may warrant a somewhat detailed account of the test. A sample of the 24-hour urine is tested for albumen, sugar, bile and other abnormal constituents and if found free from them, is carefully filtered. To 40 c.c. of the clear urine 2 c.c. strong hydrochloric acid are added and the whole boiled for ten minutes in a long necked flask surmounted by a funnel. Cool, and add water to bring the more or less concentrated fluid back to 40 c.c. Add slowly 8 grammes lead carbonate and neutralize if necessary. Filter until clear through a moist filter paper. Shake the filtrate with 8 grammes of basic lead acetate and again filter until clear. Remove the lead by shaking the filtrate with 4 grammes of powdered sodium sulphate, boil, cool, and filter. To 10 c.c. of the clear filtrate add 7 c.c. distilled water, 2 grammes sodium acetate, 0.8 grammes phenylhyrazin hydrochlorate, and 1 c.c. 50 per cent. acetic acid. Pour into a small flask with funnel condenser, boil on the sand bath for ten minutes, filter hot through a moist filter and if necessary add to the filtrate enough water to make 15 c.c. When the test is positive a precipitate forms on standing a few hours; in doubtful cases it must be allowed to stand over night. The precipitate is flocculent, bright yellow in color and microscopically consists of long, yellow, hairlike, flexible crystals, readily soluble in 33 per cent. sulphuric acid. It thus clearly resembles a modified phenylhydrazin test for sugar. In order to exclude

the latter as a possible source of error, the test should be done with a second sample of the same urine, omitting, however, the first step of boiling with hydrochloric acid. If sugar is present the yellow crystals will form even so. Cummidge declares his test positive only if the crystals are obtained in the manner first described but fail to form when boiling with hydrochloric acid is omitted. Pancreatitis regularly gives a positive reaction; pancreatic cancer in about one-fourth of the cases examined. Other conditions that may be confused diagnostically with pancreatitis fail to give the reaction. It will be seen that while the test is a little laborious, all the manipulations are very simple and require no apparatus but flasks, test-tubes and funnels.

Toxicology of Atoxyl.—Blumenthal and Jacoby (Ther. Monatsheft) attempted to determine in which organs of rabbits the effects of toxic doses took place. They were able at the time of death of the animal or shortly before to demonstrate arsenic in large quantities in the blood and bones of the animal. On the other hand they have never found arsenic in the other organs, excepting a very small quantity in the liver, and only once in the brain. They concluded that poisoning from atoxyl does not consist in a combination of arsenic with tissue cells, but that it occurs in the blood. Clinical as well as pathologic-anatomical symptoms, such as hemorrhages in all organs, have led them to the conclusion that a purely arsenical effect is produced. Some clinicians have thought of a probable anilin poisoning, but the absence of the "ocker yellow" color of the blood which is so characteristic in anilin poisoning makes this theory improbable. Blumenthal's experiments on dogs proved that symptoms of anilin poisoning were absent; thus confirming these findings. Atoxyl should be preferred to the arsenous acid, because arsenic in "statu nascendi" is split up in the animal body. Arsenic in the form of atoxyl is bound in the benzene ring. Atoxyl is an amidophenylo-arseniate of sodium. The rapidity of the splitting off within the organism it has been thought to be slower than other arsenic. It seems, however, that this view is not true, because the authors were able to demonstrate the presence of arsenic in the bladder of rabbits one hour after administration. On the contrary the excretion after one single injection of 0.4 g. lasted six days in the rabbit. Atoxyl does not act directly upon bacteria, but acts either through splitting off of arsenous acid or through stimulation of those faculties of the organism which brings about a destruction of bacteria.

Spontaneous Gangrene in Several Fingers.—Evers (Dtsch. Zeitschrift f. Chir.) reports the case of a boy 16 years of age, positively free from diabetes, syphilis or arteriosclerosis, who presented spontaneous gangrene of four finger tips of the left hand, under symptoms of general sepsis, on the sixth day of an attack of pneumonia. The starting point of the septic infection could not be determined. The localization of the multiple abscesses presented by the patient at various portions of the body (lungs, right wrist, left shoulder, left hand and fingers, coccyx) is best explained by the dissemination of emboli, but it remains very peculiar that precisely four fingers of the same hand were affected with gangrene, since a blood vessel entering into consideration for all these fingers together is primarily excluded. Instances of simple embolism subsequent to infection have been repeatedly published. The author's case, however, presents the noteworthy feature that besides the emboli of the shoulder and wrist, etc., separate emboli must have strayed accidentally into each individual finger of the left hand, which is practically out of the question anatomically. Another explanation must therefore be discovered. It was claimed by v. Zoge-Manteuffel and by Weiss that they had succeeded in demonstrating the autochthonous formation of thrombi in the blood vessels, generally due to arteriosclerotic changes in the intima, notwithstanding the youth of the patients. This form of gangrene was accordingly designated by them as angiosclerotic gangrene. In all the reported instances, however, the peripheral gangrene constitutes an independent pathological process, instead of being a symptom of sepsis or of an infectious disease distributing some toxin in the body. The existence of obliterating endarteritis, or disease of the intima with secondary antochthonous thrombosis, could hardly be assumed in the author's case. The assumption of a spastic ischæmia (as occurs symmetrically in Raynaud's disease) would appear less improbable. Again, a toxic influence upon the vascular nerves suggests itself in view of the poison acting in the entire body through the general sepsis. The assumption of similar influences as acting in the author's case remains a matter of conjecture. The most probable cause under the circumstances would seem to be an antochthonous thrombosis. In addition to this possibility, obliterating endarteritis, embolism, spastic ischæmia and a toxic influence upon the nerves must all be taken into consideration. In the present state of experience along this particular subject, it is not yet possible to offer an absolutely

convincing explanation of this very unusual observation.

The Influence of School Life on the Spread of Scarlet Fever.—Goldsmith (Lancet) holds to the view that schools greatly contribute to the spread of scarlet fever. He presents elaborate tables and a chart showing local conditions in reference to his main contentions. His study embraces 19,219 cases. In taking up the question of school influence, we may ascertain the day of the week on which the onset of each case occurs. By this method one can see on which day most cases arise, and further, whether Saturday and Sunday, days of non-attendance at school, produce any influence in lessening the number of cases on certain days following, allowance being made for incubation. Again comparison can be made between the holidays and the school terms in relation to the days of onset. It is of importance also to ascertain if, as regards the day of the week, the onset in infants and adults corresponds or not with the results obtained in school children. A second method of approaching the subject consists in ascertaining the total number of cases occurring among children of school age during the holiday and comparing this with the number of cases occurring during an equal period of time before and after the holiday. Further, the effects of the holidays on infants and adults must be compared with that in children of school age. One might expect infants to show only a slight diminished incidence during the holidays. In adults also a fall may be expected, proportionately greater, however, than in infants, owing to the diminished number of cases among school children during the holidays. This fact, of course, would tend to lessen the number of cases in infants also, but the greater amount of contact during the holidays between infants and those members of the family who are of school age will in all probability counterbalance the diminished prevalence of scarlet fever among the latter. In adults the amount of contact is not increased, as they are at work all day and are exposed to infection from school children mainly in the evening whether the schools are open are not; this observation refers chiefly to male adults, but it is applicable in a less degree perhaps to females also, many of whom are employed in mills, shops, etc. The author's cases extend over a period of nine years and his tables, while they cannot be well abstracted, are yet very suggestive to educational officers. Most striking is the sudden rise in the number of cases when the schools reopened after summer and Christmas holidays. The author simply presents his facts without suggestions as to remedying the present state of affairs, except as to hint at the systematic medical inspection of all school children and the instruction of teachers in the recognition of the early evidences of the contagious diseases.

Vaccine Therapy.—Wright (Lancet) in the conclusion of his lecture on the principles of vaccine therapy, summarizes his personal experience as to practical results, as follows: 1. Type of infection where a single species of microorganism has penetrated into the interior of the body and has established itself in one or more foci without causing any considerable destruction of tissue or constitutional disturbance. Typical examples are where tubercle bacilli have lodged in lymphatic glands and where staphylococci have penetrated into the subcutaneous tissues and yet causing only suppurative (furnuclar) as distinguished from necrotic (carbuncular) changes. Here his results have been all but uniformly successful. In furnuclosis cure results in a few days, in tubercular adenitis in from five weeks to eighteen months. The same is true of tuberculous infection of the testicle, kidney, and urinary passages, and also, to a modified degree, in early cases of pulmonary tuberculosis. 2. Ulcerative type of infection, met with in connection with the breaking down of nodules in the deeper tissues and the penetration of superficial infections. This is as tractable to vaccine therapy as type one, except where secondary infections have supervened. If anything, an open ulcer is more tractable than a focus of infection in the deeper tissues which has not found vent or which has not penetrated to the lymph bearing stratum below. 3. Infections of the skin. These fall into two categories. Dry, scaly, and nonvascular infections, such as "lupus psoriasis," are extremely intractable to vaccine therapy. But where the skin is vascular, or the microbes penetrate deeply, as in staphylococcal sycosis, excellent results are obtained. 4. Infections of mucous membranes and of the glands and ducts which stand in connection with mucous membranes. These are readily influenced by vaccine therapy, good results having been obtained in infections of the middle ear, the antrum, the nasal sinuses, dental alveoli, and salivary glands, also in coli infections of the intestine and gall bladder. But it must be remembered that most mucous membranes harbor on their surface many forms of microorganisms, and as vaccine therapy only does away with one particular form, some other class may multiply and cause trouble. In bladder infections we generally have also to deal with a bacter uria. 5. Infections of sinuses.

Very successful results are obtained in these cases when the inoculation of bacterial vaccines is combined with a course of treatment by local lymphagogues. 6. Mixed infections. Practically every case of suppurating lupus is complicated by staphylococcus infection, and most of them also by a streptococcus infection. And what holds true of lupus holds true, *mutatis mutandis*, of every tuberculous affection to which microbes can find access. In these instances of mixed infection, two cases must be considered: a. Case where vaccine therapy is directed to the destruction of only one of the infecting microbes. In a few instances where furunculosis was due to both streptococci and staphylococci, the extinction of one organism under vaccine therapy has indirectly led to the extinction of the other. But such an event is extremely exceptional, and all other organisms except the one specially aimed at are quite unaffected. Indeed the multiplication of competing microbes may be thereby favored. b. Case where vaccine therapy is directed to the destruction of all the infecting microbes. Where in cases of mixed infection measures are taken to immunize the patient against each of the different infections, very successful results have been obtained—for instance, in lupus, cystitis, and endometritis. 7. Generalized infections. In six cases of Malta fever, distinct clinical improvement occurred in each case in association with an increased development of antibacterial substances in the blood. In two cases of streptococcal septicæmia a complete cure was achieved. In a third case (one of malignant endocarditis) vaccine therapy brought the temperature, which had been elevated for months, down to normal, the patient dying later of cardiac complications. In three other cases of streptococcal endocarditis the patients succumbed, having in each case failed to make any immunizing response to the inoculations.

Rupture of the Uterus.—Munro-Kerr (Brit. Med. Jour.) reports a case of complete rupture of the uterus, occurring in a ricketty woman during labor. The fœtus escaped into the peritoneal cavity. Panhysterectomy was performed and the patient made a good recovery. In many cases of this kind, the rupture of the uterus is not recognized until after the birth of the child, many of the classical symptoms being absent. The sudden feeling of something having given way is present in but very few cases, and only where the laceration is extensive and the fœtus has escaped into the abdominal cavity or the cellular tissue under the peritonæum. Alterations in the shape of the abdominal swelling can also only occur where the child passes wholly or in part out of the uterus, when two abdominal swellings become apparent. A bipartite uterus may simulate this condition. The fœtal parts are much more easily palpated after the child has passed into the abdominal cavity, than when it is still in the uterus. The amount of hæmorrhage which occurs as a result of rupture of the uterus varies greatly. In only three of the author's thirteen cases was it severe. But there may be but little bleeding from the vagina, much of the blood escaping into the peritoneal cavity. But as a rule the bleeding is very gradual, the child's body acting as a plug. After the fœtus is extracted the hæmorrhage may become much more profuse. The situation of the tear as regards the uterine blood vessels is of great importance. The pulse rate gradually rises, and uneasiness, general abdominal pain, and the ordinary symptoms of collapse become more pronounced. The diagnosis between complete and incomplete rupture can be arrived at only by vaginal examination. When the rupture is complete the intestines can be distinctly felt; this is not possible where it is incomplete. Of fourteen cases seen by the writer, three were incomplete and all recovered; two of the complete cases were operated on and both died. Of the remaining nine cases in which hysterectomy was done, six died. Plugging is the safest treatment for the practitioner, providing collapse is not extreme.

The Unborn Child.—Helme (Brit. Med. Jour.) states that we must recognize the rights of the unborn child: 1. To life. 2. To protection from the hereditary taint of degeneracy. 3. To health, that is, to conditions conducive to the safeguarding of its health. 4. To Nature's food (when born), that is, its mother's milk. 5. To its natural protection (when born), that is, its mother's care. The recognition of these rights demands the recognition of the following duties on the part of the parents, the profession, and the State: 1. On the part of the parents; a clean and normal life before and after conception. 2. On the part of the mother. a. The consistent regulation of her mode of life. b. The abstention from alcohol. c. The feeding of the child by the breast. d. The care of the child after birth. 3. On the part of the medical profession. a. The restriction of therapeutical fœticide. b. The education of a healthy public opinion. 4. On the part of the State. a. Restriction of procreation to the fit—i. By the regulation and restriction of marriage to the fit either by education or legislation. ii. By the prevention of procreation by the unfit—whether by segregation of the

unfit, or sterilization of degenerates, or the evolution of a healthy public opinion. b. Regulation of the life of the pregnant woman—i. By State provision of food for the necessitous. ii. By provision of hospitals for the reception of women during pregnancy. iii. By State prohibition of woman's work and employment during pregnancy. c. Immediate registration of (a) still births, (b) premature labors, (c) abortions, and (c) if practicable, pregnancy. d. Registration of birth within twenty-four hours. e. Regulation of the life of the woman who has given birth to a child—i. By State provision of food to the necessitous. ii. By State prohibition of woman's work for at least six months after confinement.

Morphological Diagnosis of Pathogenic Protozoa.

In the New York Medical Journal Ewing notes that the great point of disagreement among zoologists is not so much with reference to the existence of a certain protozoon, but with reference to the right of certain intracellular bodies to be included in the cycle and the relation of one set of forms to another. This matter has come up especially in the search for protozoa in cancer, rabies and the exanthemata. The mere recognition of protozoa may be an easy matter, but the identification of cellular degenerative products is most difficult. Ewing's object is to urge that serious dangers are inherent in the mere morphological diagnosis of protozoa in diseased human tissues, and he declares that the collateral evidence must be favorable before new and very peculiar protozoa can be established as the cause of disease. The great danger surrounding the morphological diagnosis of protozoa in human tissues lies in the fact that in many diseases, some of bacterial origin, intracellular processes give rise to structures closely resembling protozoa. This fact is then presented by the author with reference to variola, scarlatina, measles, rabies, glanders and cancer. He says that collateral evidence is almost conclusive against the protozoan origin of malignant neoplasms, since no parasitic invasion can explain the autonomy and organoid character of many tumors and there is no parallel protozoan disease anywhere in the animal or vegetable kingdom. The present state of our knowledge points to the conclusion that the virus of variola and rabies and possibly of measles is intimately connected with the tissue proteids which form the bulk of the specific cell inclusions of these diseases, but in itself of a nature not yet understood and not yet paralleled among known protozoa.

Fehling Test for Sugar.—McLean (British Medical Journal) enumerates and explains the action of the different substances in the urine which interfere with the Fehling test or give an ambiguous reaction. In regard to the general significance of these ambiguous reactions he says that every urine contains a certain amount of sugar which is prevented by the creatinin present from giving any reaction with the Fehling test. Concentrated to half the amount, and containing consequently half the amount of sugar, such a specimen would give a doubtful Fehling reaction. He advises in doubtful cases, where the specific gravity is high, that it be reduced by the addition of water to about 1015.

In urines containing a slightly higher percentage of sugar than normal the important point, of course, is to determine how much urine is passed per diem, and so obtain a clue as to the total sugar passed. An ambiguous reaction with Fehling's test in the urine of an individual passing less than 1000 c.c. per day would obviously have a different significance to that of a urine giving a somewhat similar reaction, but of which the daily average amount was nearly 2000 c.c., or even over this. In a case giving a modified reaction with Fehling's test after dilution it is always advisable to postpone a report until a future examination can be made, for it seems certain that the presence of small amounts of sugar in urine in quantities above the normal is often caused by factors which have very little direct bearing on the probability of life. The amount of exercise taken, the quantity of carbohydrate eaten, working or sitting in badly-ventilated rooms or offices, temporary feverish or mentally-disturbed conditions, alcohol, etc., all tend to cause a slight increase in the amount of sugar, excreted in the urine of many apparently healthy individuals.

Again observation proves that sugar may be occasionally present in the urine of healthy people without any apparent cause, and that the power of assimilation of carbohydrates may vary within fairly wide limits, not only in different individuals, but in the same individual. The important point to consider is whether, with ordinary diet, the urine always contains a small excess of sugar. If it does so, the case is suspicious. If the sugar is of but temporary occurrence it can be said that in the majority of cases its presence is of no importance. This temporary increase of sugar is often observed in cases of mental disturbance.

The fact that every urine contains a certain amount of sugar, that the amount normally present varies with different individuals and probably for the same individual, and that the test is at best but a relative one, indicates that the occurrence of an

ambiguous reaction in a concentrated urine is generally of no clinical importance, and though largely due to carbohydrates, does not usually indicate an abnormal condition. In urines of low specific gravity these ambiguous reactions do generally indicate a slight excess of sugar, but its probable bearing and importance can only be ascertained by watching the case, and by repeated examination of the urine at short intervals. In many cases it will be found to disappear and give no further trouble; in a few it may show the starting point of a true diabetes millitus, and in such cases early detection of the true condition is exceedingly important.

Eosinophilia in Hydatid Disease.

Welsh and Barling (Scottish Med. and Surg. Journal) report the results of the examination of the leucocytes in 20 consecutive unselected cases of echinococcus invasion, which have come under their observation in Sydney, where the disease is of frequent occurrence. All these cases were operated upon and blood examinations were made both before and after the operation. In three-fourths of the cases the count before operation showed an increase of the eosinophiles above the normal number, and in one-half of the cases the increase was very considerable (over 500 per c. mm.). The number, however, may vary greatly from time to time in the same case, and no explanation of this variation can be offered. No relation was established between the degree of eosinophilia and any other factor. Neither the age, sex nor temperature of the patient, duration of the disease, presence or absence of rash, site of the cyst, nor condition of its contents, whether clear or turbid, could be shown to have any influence on the leucocyte reaction. The most that can be said is that in all the cases where recent rupture of the cyst had occurred some degree of eosinophilia was present. The basophile leucocytes also showed before operation some increase in about half the cases. There was, however, no correspondence whatever between the degree of basophilia and the degree of eosinophilia. Indeed, the authors consider that this want of correspondence may have some diagnostic significance, since the association of basophilia, with slight eosinophilia, or marked basophilia, without eosinophilia, may afford an indication of hydatid invasion. In two cases the neutrophiles were found increased before the operation, and in one case the non-granular leucocytes. After operation the number of eosinophiles fell in almost every case, and this diminution may be extreme and may be exceedingly rapid. This fall is succeeded by a secondary post-operative rise, which may reach or even exceed the initial eosinophilia. The basophiles show no such regularity. They may appear after the operation when they were absent before, or may disappear after having been previously in excess.

The Micrococcus of Acute Rheumatism.

In a study of the relation of the so-called streptococcus of rheumatism to the other members of the streptococcus group, Walker (British Medical Journal) found, in 15 cases of his own, 10 in which a constant streptococcus was obtained in pure culture. In eight of the cases the organism was isolated during life, while in the remaining seven it was found in the heart's blood, post-mortem. Experiments on animals, details of which are given, produced the morbid lesions of rheumatism. The difference in culture, behavior, etc., from other streptococci are given, and it is worthy of note that, while this special germ produced invariably fever and acute arthritis, and occasionally in addition perior endocarditis, or both, and in large doses, a fatal result, it never produced pyæmia or pyæmic abscesses, as is frequently the case with ordinary streptococci. Summarizing then his own results and those of other observers, he notes that this organism has been isolated in pure culture from subjects of the disease, both during life and on post-mortem examination, by a succession of observers on a relatively large number of occasions; that it has been seen microscopically in rheumatic lesions—in the synovial membrane of joints, in the cardiac valves and in the meninges in cases of acute rheumatic chorea, and that it was both seen in a rheumatic nodule and cultivated from it in pure culture by Paine and Poynton. On injection into animals it produces morbid lesions similar to those of acute rheumatism. It has the appearance and general cultural characters of a streptococcus. But it produces in considerable amount an acid, formic acid, which is not known to be produced in like amount by streptococci from any other source. And this appears to afford a specific distinction. Walker notes some objections to the acceptance of the causal theory of this particular organism. It has not been found by all observers. It has been suggested that the organism was either a contamination or a terminal or agonal infection or a secondary infection, but against the latter theory is the fact that the organism has been isolated during life. It has been further suggested that the organism was the occasion of a secondary infection superposed on the rheumatism. This view, says the author, is conditioned on one's conception of what true rheumatism consists in. In general, he regards the case

in favor of the organism as not yet absolutely proven.

The Treatment of Ozoena.

Broeckaert (La Presse Otologie Belge) at his clinic treated 20 cases of ozœna with paraffin injections, obtaining results which permitted him to state an unqualified endorsement of its employment. The cases were fully developed and marked. A few, in which the diagnosis was doubtful, were not subjected to the treatment.

Before treatment was undertaken the mucous membrane, the secretions, the organs of smell and the conditions of the accessory sinuses were all carefully noted. Those cases reported as cured have been absolute recovery of all symptoms. The author reports the procedure as dangerless. He also reports that he instituted an examination of patients whom he had treated in a similar manner in the second or third year, showing that the cure remained permanent.

Regarding the ætiology of ozœna, the author draws the conclusion that the infection is a toxin infection, paratuberculosis, which develops along the blood vessels and lymph channels of the mucous membrane. The treatment with paraffin injections acts particularly well. In cases where the ozœna is complicated by accessory sinus disease one cannot expect the cure to be complete without first systematically treating the disease of the sinuses.

Relations Between Acromegaly and the Sexual Function in Women.

Patellani (Ann. di Ostet. e Gin.) has collected and analyzed 145 cases of acromegaly in women, with reference to its relations to the sexual functions. His conclusions are given as follows: The importance of an altered genital function in acromegaly is demonstrated especially by arrested menstruation. It is important to distinguish between the cephalic and initial, and paraacromegalic forms. In women the classic form begins with the sexual period, never before puberty or after the menopause. Arrest of menstruation may result from accident, infectious diseases, prolonged lactation and uterine atrophy. The normal menopause may be considered a physiological acromegaly. Regular menstruation excludes acromegaly from consideration. Amenorrhea is not simply a symptom of acromegaly, but bears a causal relation to it. Pregnancy may occur with acromegaly, but lactation will hasten the progress of the disease. Ovulation may continue during the disease. The amenorrhea may result from atrophy of the uterus due to lactation. Lactation in a woman who has had scanty menstruation should be carefully watched. In all cases in which the genitals were examined in life or after death the genital organs were found atrophied or small. The disease occurs especially between the ages of twenty-one and twenty-five. It occurs more frequently in virgins and sterile married women, and the course is more rapid in them than in other patients. It may be unobserved for from one to five years. It favors sterility. Castration is of no therapeutic value. Experimental studies of the hypophysis show that its function is to regulate metabolism, and its destruction causes poisoning from accumulation of toxic substances.

Remote Results of Treatment of Cancer of the Breast.

Villard and Mouriquand (Lyon Med.) regard the prognosis of cases of cancer of the breast as much better when the axillary glands are not involved. Many cases may be cured by early operation, and any tumor of the breast after thirty years of age should be removed at once, even if it appears benign, on account of the liability to degeneration into a malignant form. When the operation has been done thoroughly with removal of all glands, of the tumor wide of its borders, and of the aponeurosis and the pectoral muscles when the tumor is adherent, the use of radiotherapy on the resultant scar serves to sterilize all the remaining tissues, and to prevent recurrence. In this field it is most beneficial. In some cases of recurrence its use is dangerous, since it provokes a dangerous glandular reaction. The effect in most tumors is to reduce the size of the tumor and cause destruction of the cellular elements. Of the fifty cases treated in the service of E. Villard, twenty-two are living without recurrences, and five with recurrences that have probably been cured by X-rays. They were all undoubted cases of cancer, and all but twelve were confirmed by microscopical examination. It is now from eighteen months to eleven years since the operations. In twenty-eight cases in which the glands were examined, one-half were found involved and one-half were not, but the proportion of cures was much greater in those in which there was no glandular involvement.

The Use of Scopolamine in Obstetrics.

Holzbach (Munchener Medizinische Wochenschrift) has investigated the question of the excretion of scopolamine as used by injection in obstetric practice. The most serviceable method of testing the milk and urine of the mothers and the urine of the infants was found to be the physiological test on the uncleated frog's eye. Tests on thirty-five eyes showed that the colostrum of the parturient woman always gave a dilatation of the pupil, and the milk did the

same up to the third day postpartum. The urine of the infants obtained immediately after birth always contained the alkaloid, while the second passage gave a much less marked reaction, and in the third it could usually not be detected at all. Even when the hyoscine had been given only once a quarter of an hour before birth the alkaloid was found present in the urine of the infant. The author accordingly concludes that the hyoscine administered to the mother is not only excreted in the urine, but is also present in small amounts in the colostrum and milk during the first few days. It also passes through the placental circulation into the body of the infant, from which it is promptly eliminated through the kidneys. Whether the child suffers as the result of this is not yet certain, though it seems unlikely. The proof of the presence of small amounts of the alkaloid in the infantile circulation appears, however, to justify the contention of Gauss that the respiratory difficulties often exhibited by children born under scopolamine anesthesia are referable to this cause.

Veratrum Viride in Eclampsia.

Mirto (Annali di Obstetricia e Ginecologia) gives the histories of sixty-one cases of eclampsia treated by the hypodermic use of extract of veratrum viride in the obstetrical clinics of Pavia and Milan. He recommends the use of this drug because the convulsions are invariably accompanied by a rise in arterial pressure, which may be regarded as an index of the approaching seizure, although it may not be the cause of the convulsions. He has observed that as soon as the arterial pressure is lessened the convulsions are moderated, the frequency of the attacks is lessened, and in some cases the convulsions are so controlled that the pregnancy can go on to full term and delivery be normal. He has also given it as a preventive measure in many cases in which there was albuminuria and casts accompanied by high arterial pressure, and believes that it prevented the convulsions which would otherwise have occurred. He recommends the use of the drug as a preventive and as a curative treatment for frequent and puerperal convulsions.

Investigations Relating to the Pathological Physiology of Diabetes Mellitus.

Labbe (Revue de Medecine) defines diabetes mellitus as essentially a disease of the glucose regulating apparatus which includes principally the liver, pancreas, and nervous system. Their function is to limit the production of glucose and prevent its accumulation in the blood and tissues. When diabetes is present the tissues are unable to utilize and oxidize the glucose, or the liver is incapable of storing it and retaining it in the form of glycogen, so that glucose in excess passes into the blood. The resulting symptoms are glycosuria, polydipsia, polyuria, polyphagia, etc. Such is the process whether the primary lesion is in the liver, the pancreas, the nervous system, or the pituitary gland, the organism being absolutely or relatively unable to oxidize the carbohydrates. Disturbance in the regulation of glucose is not present in all diabetics to the same degree; in one class of cases the oxidizing power is entirely lost, all the glucose produced by the ingested carbohydrates, all that results from the metamorphosis of albumenoids and fats ingested, and even that which is derived from the changes in the tissues being discharged from the kidneys without benefit to the organism. This is the grave variety of diabetes. In another and more common variety the oxidizing function is not entirely in abeyance, a certain quantity of carbohydrates being tolerated without glycosuria, this condition appearing only when the limit of toleration has been passed. To appreciate the gravity of a given case of diabetes, it is therefore necessary to compare the degree of glycosuria with the amount of food ingested.

Clinical Remarks on the Treatment of Surgical Tuberculosis.

Steward (Brit. Med. Jour.) says that it is doubtful whether the general body of the profession realize the marked improvement which has been made in the treatment of surgical tuberculosis during the last decade. The principles of treatment that apply to a case of pure tuberculous disease are very different from those suitable to a case of mixed infection, and the prognosis of the case is profoundly affected in an adverse direction when once a secondary pyogenic infection has been added to a tuberculous lesion. Tuberculosis of the bone or joint is curable in the great majority of cases; but once sinuses have formed and the bone or joint has become infected secondarily, the case is rapidly drifting into the incurable class, with the prospect of the eventual onset of amyloid disease. It is clearly, therefore, of the highest importance to be careful in these cases, lest operative measures should lead to a mixed infection, and thus contrtbute to the production of a condition far more serious than that for which they were undertaken. The author calls attention to the following points in the treatment of tuberculous collections generally, which will minimize the chance of sinus formation. The general condition should be improved as much as possible before operation by complete rest in bed in the open air, and plenty of good food. Incis-

ions should be made where the structures overlying the abscess are thick, so that their subsequent suture will leave a considerable mass of tissue between the skin and the abscess-sac, for if the incision passes through the skin thinned out and adherent to the abscess, the sutures will pass directly through the skin and the abscess-cavity, and thus form lines, along which direct infection will be liable to occur. In the case of a psoas abscess, for instance, it is preferable to make the incision above Poupart's ligament. When the sac of the abscess is reached, it is well to draw the superficial structures to one side before opening the abscess, so that, should the abscess refill and the scar in the sac stretch, the parts immediately over it do not become thinned and liable to give way. The use of the finger to explore the cavity should be strictly avoided. Curetting should be carried on with as much gentleness as is consistent with complete removal of the lining sac. The application of strong antiseptics to the sac-wall is of doubtful utility. Closure of the wound should be complete and thorough and attained by the introduction of several rows of interrupted sutures. Catgut is recommended for suture material. A drainage-tube should on no account be used, and the subsequent dressings should be carried out with the greatest of care to prevent contamination. The parts should then be kept at rest for a prolonged period. Aspiration of a tuberculous collection is both inefficient and risky, in that the fluid contents only can be withdrawn, and that the needle track is liable to become the seat of tuberculous disease. The author dwells upon the great value of prolonging the treatment by conservative methods, as opposed to early operation, and is convinced that better final results are thus attained. For some time he has been giving tuberculin in all cases of tuberculous disease of the bones and joints, and is of the impression that in the majority of cases the effect has been beneficial.

The Present Status of Our Knowledge of the Parasitology of Syphilis.

Professor Hoffmann of Berlin read a paper upon this subject before the Dermatological Congress, New York, September, 1907, in which he said that the ætiological importance of the spirochæta pallida has been indisputably demonstrated and is practically universally admitted. As regards the morphological and biological properties of the parasite, these were accurately described by Schaudinn, to whose work but little has been added since. The spirochæta of syphilis presents in shape an extremely fine spiral with numerous abrupt and regular twists (corkscrew shape). It is weakly refractive, and hence not readily recognized in the fresh condition without special adjustments (darkened microscopical field). The sum total of its properties is sufficient and conclusive for the diagnosis, although none of these properties taken by itself is absolutely characteristic. (Great lengtht averaging 8-15 mm., of the thread in proportion to the very slight thickness, abou, ¼ mm.;relatively slight variability of shape, due to the great elasticity of the spiral; manner of motion in fresh specimens; reddish tint in specimens stained according to Giemsa.) It is sometimes difficult to differentiate the parasite from certain varieties of the dental and intestinal spirochæta, and its distinction from the spirochæta pallidula of Castellani (spirochæta frambœsiæ) would hardly seem to be absolutely certain at the present time, although a few minor characteristics were found by v. Prowazek.

Concerning the finer structure of the spirochæta, it frequently presents long terminal threads terminating in a point (Schaudinn's flagellæ). An undulating membrane or distinct nuclei, as observed in the larger spirochætes, have not as yet been demonstrated; presumably the nuclear substance is distributed throughout the entire length of the spiral in shape of extremely fine granules. Sometimes nodular bulgings of the thread are found in Giemsa specimens, as well as silver preparations, perhaps referable to an accumulation of the chromatin. The ends of the syphilis-spirochæta may be transformed into small globular structures, the so-called terminal bodies, which occasionally appear in shape of a loop. Sometimes the thread is distinctly seen to be rolled upon itself.

Certain authors assume a rectilinear form to be characteristic of the products of late syphilis. This view is not justifiable, however, since these forms are observed to occur not only in late but also in recent syphilis. They are formed more frequently and more distinctly in sections than in smears. Disintegration into individual segments, down to dissolution into a series of granules, may likewise be demonstrated rather frequently in sections of all sorts of pathological products.

Some authors, including the author of this paper, assume the manner of propagation to be longitudinal fission, with Schaudinn, whereas others are in favor of transverse division, like Metschnikoff and Levaditi. The posthumous papers of Schaudinn contain a definite statement to the effect that he frequently noted upon living specimens a longitudinal division beginning by the duplication of one of the terminal threads. The author observed the same

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process in fresh specimens of the spirochæta balanitidis.

All attempts at *culture* have hitherto proved unsuccessful. As to the further biological properties of the syphilis-spirochæta, it usually remains actively motile only for a few hours in fresh airtight preparations. While weak movements may sometimes be demonstrated during several days, it does not seem to have been positively shown that a certain motility may be preserved at the end of a few weeks. It is positive, however, that specimens prepared after this manner may show syphilis-spirochætes as well as other species of spirochætes in well-preserved individual germs, as far as their shape is concerned, even at the end of months.

Complete unrolling and wreath-shaped folding, followed by a return to the former actively motile form, were observed by Hoffmann in these specimens not only, but also in the blood of children having congenital syphilis. Spontaneous agglutination was observed by him, as well as by Landsteiner and Mucha, in the serum of papules, etc., a few hours after withdrawal. Normal human serum, as well as serum from syphilitic patients, was further found to exert a certain inhibitory action upon the motility of the spirochætes, without, however, producing a distinct agglutination. The old observation of Hoffmann and v. Prowazek to the effect that the serum of untreated syphilitics, the disease dating from six to eight months back, may sometimes inhibit motility and give rise to a phenomenon of agglomeration, is claimed to have been repeatedly confirmed of late by Zabolotny and Maslakowitz.

As regards the occurrence of the spirochæta pallida in the various pathological foci, it has been positively shown that it is present and demonstrable, in variable number, in all products which still contain some of the virus, and which can be inoculated. In acquired syphilis the demonstration is usually easy in tissue juice, irritative or aspirated serum from primary sores, or genital, anal and mucous papules and erosions. It is pretty constant also in pustular, crusty and papular skin syphilides of the early stage, and in the puncture juice of swollen lymph glands.

Conditions differ in congenital syphilis, where there is frequently an actual inundation of the organism with the parasites. In the severer cases especially the spirochætes may be demonstrated in the efflorescences of the skin and mucous membranes not only, but also in the lymph glands, and even in the circulating blood. They have been found in very large numbers in the various internal organs of the fœtus, as well as of little children dead from syphilis. The liver usually contains the greatest quantities of the spirochætes, which may appear in the various secretions and excretions of the body. In cases of congenital syphilis the spirochæta pallida was frequently demonstrated in the blood of living children (dark-field illumination), not only those who promptly succumbed to the disease, but also those who subsequently recovered under mercury.

The distribution of the germs in the affected tissues and organs is not uniform in character. In a general way they may be said to be most profuse in the marginal zone and in the immediate vicinity of the pathological foci, whereas they are apt to be more scanty and often entirely absent in the spots which were affected the most severely and for the longest time. Phagocytosis plays a certain part in the destruction of the germs. The spirochætes present a very irregular arrangement, and are sometimes found in the course of certain lymph vessels, where they lie in the vascular lumen, between the endothelia, in the adventitial tissue, and especially in young budding blood-vessels, which grow into the hitherto unchanged connective tissue, and are often positively interspersed with spirochætes. Erhmann pointed out that more or less distinct bunches of spirochætes are found within leukocytes and lymphocytes. The most striking pictures of this kind were seen by the author in leukocytes within the alveolar lumina of the lung in a case of white pneumonia.

Certain recent investigations of secondary syphilitic exanthemata show the spirochætes to be chiefly present in the dilated blood-vessels of macular syphilides and in the deeper layers of the proliferated cells of the rete in the papular form. Individual parasites as well as whole groups and bundles with all the signs of disintegration are found also outside of the cells, in part within the vascular lumina. These phenomena are explained only by the action of antibodies in the serum. Meanwhile, the defensive forces of the organism do not by any means invariably destroy all the parasites in the pathological foci.

The blood does not offer favorable conditions for the spirochæta pallida, which, in the author's opinion, is a parasite adapted to the narrow spaces of the lymphatic system, the system primarily and preferably affected in syphilis.

The location of the spirochætes during the latent stage of the disease has not as yet been definitely ascertained, but it is known that they may be found at a late date in the residues or scars of hard chancres and exanthemata. Mercury, as a rule,

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causes a rapid subsidence of the majority of the parasites in the pathological products, but some of them remain demonstrable for a long time during the treatment. The mode of action of mercury is not yet well known, and the same is true for atoxyl.

These briefly-outlined findings in the human subject are in themselves sufficient for the practically positive demonstration of the ætiological importance of the spirochæta pallida. Any remaining doubt is removed by the fact that the spirochætes of various laboratory animals, even after a number of passages (13), perfectly correspond to those observed in the human organism. No other microorganisms enter into consideration for the ætiology of syphilis.

The spirochæta pallida possesses a great diagnostive importance. The demonstration of its presence permits the diagnosis of recent primary sores, suspicious erosions of the genital organs and mucous membranes, giandular swellings (puncture), and other obscure conditions. In congenital syphilis the examination of the blood (especially under dark-field illumination) is of very great importance. Positive findings are conclusive, whereas negative results should be utilized very cautiously only.

The possibility of recognizing and excising quite recent primary sores is an important point in the treatment. From the prophylactic point of view also, the timely removal of the first pathological focus, which contains the largest amount of the poison, and the prevention or restriction of the secondary phenomena, are extremely valuable.

The author holds that in these cases the mercury treatment must not be omitted, because, according to past experience, the spirochætes promptly enter the lymph and blood channels, and because it is never certain that the poison is not surreptitiously developing at some point of the body (such as the vascular walls or the nervous system), even in those cases where the general symptoms fail to occur during months or years. Whether to institute the first part of the treatment at once, as advocated by Thalmann and done by the author in a series of cases, or whether to begin only with the onset of secondary symptoms, or at the usual time of their occurrence, should they fail to develop—these questions can only be settled by the experience of years to come. The

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"There was a time," says Conan Doyle, "when a young man who was going to do anything in the world was passed mechanically through the Bar. I believe the time will come when the similar young man will be passed through medicine, because I know no other means by which he could get to the fundamental and absolute facts of life. The mere fact that in his medical training a man has to undergo so searching an ordeal in the most critical years of his life, and pays such enormous attention to detail, is in itself evidence that he receives a splendid training. I have always said that for a man who has mastered "Gray's Anatomy" life has no future terrors. If our young army officers had five years' study in the same sense that the young medical man has five years' study, we should become the terror of Europe."

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complete prevention of the general phenomena is usually a failure, even in the immediate method.

With special reference to the atoxyl treatment, as recently recommended, it may be stated that atoxyl was found to possess a protecting or preventive action for monkeys and rabbits, and apparently to favor recovery in the former, in the animal experimentation of Uhlenhuth, Hoffman and Metschinkoff. Several observations upon man showed atoxyl to possess an unmistakable influence upon the majority of syphilitic manifestations. Especially in ulcerating syphilides of the skin and obstinate affections of the tongue it may prove useful even after mercury and iodide have failed. In these cases, and in idiosyncrasy against these chief remedies, atoxyl may be welcomed as a valuable new medicament. It should be kept in mind, however, that it often exhibits certain unpleasant and actually dangerous by-effects; the administration of large quantities may be followed by aneurosis. The idea expressed by certain French authors as to its being equivalent or even superior to mercury is based upon an error.—Medical Review of Reviews.

Miscellaneous.

Modern Aids to the Torture of the Sick.

Under the above title, we have discovered in our local daily press a most interesting article, written by "the sick man." It contains enough of truth to warrant reprinting in our pages. We feel that the poor sick man who wrote this article was indeed unfortunate during his illness, but we cannot excuse him for reasoning from one experience, and judging a class by one of its representatives, a representative who seems to us a very poor sort. But let us quote the sick man:

"Some day when you have floated up to consciousness that is not not too definitely defined, you become aware of the nurse's presence. She is a thing of cap and gown, featureless—or at least having no individuality of features. She lifts your head from the pillow, and saying, 'Swallow!' thrusts medicine into your mouth. 'Go to sleep!' she says, in a tone of authority.

"You ask for a drink of water, to know who she is, and whence she came, and how long you have been sick, and what seems to to be the matter, and for members of your family. You are told to be silent and to go to sleep. You remember neglected things that pertain to your business, and want to get up to telephone the office, but nay, nay, little one; the nurse orders you to go to sleep and refuses to answer questions. She devotes no time or art or skill or tact to soothing you when feverishly exalted nerves keep you awake. She tells you to go to sleep, and, saying 'bosh' occasionally refuses to allow even the soothingest person to enter your room. She creaks in a rocker just out of your sight, embroidering fantastic roses.

"Sick as you are, the short weight mentality of the nurse becomes apparent. She has no tact; no examinations in tact are required in the hospitals where trained nurses are graduated twice a year by hundreds. Later you become aware that psychology is not in the nurses course. Your nurse keeps a record for the doctor, which is supposed to be a hard and fast, accurate history of your changing condition. Should accident aid you to possession of this record you will find that you are credited with eight hours' sleep, when you know it was the nurse who slept, while you lay tossing. But only accident can aid you to perusal of this record, which she keeps jealously guarded afar from you. I have heard there are good nurses, tender, attentive, intelligent—psychologically intelligent—but this is my impression of one."

To us it seems that, though this article is somewhat whimsically written, and, indeed, shows a highly wrought temperament between its lines, it nevertheless assumes the character of a lay sermon. We somehow wish that the young lady who embroidered the fantastic roses might read it, and that that its moral might strike home; for she would then see that in assuming certain airs, and neglecting to strive toward the attainment of the relationship that should exist between patient and nurse, she not only harms herself, but she brings down much prejudice on the innocent heads of her deserving sisters.

The sick man is right, in that psychology should be taught in nurses' training schools. It should be taught, however, to the superintendents and principals of these institutions, in order that they may pick out such women to become nurses as will regard their work in the light of a mission to suffering humanity. Nurses should strive, not through definite knowledge attained, in the treatment of a sick man as a thing in bed, to compass their work, but rather should they rely upon their true women's hearts and natural feminine tact to gain the status with their patients that our friend, the sick man, above quoted, so urgently and pleadingly calls for.

Those of our readers who have had much personal (not professional) experience with nurses will recognize in the foregoing sketch a condition of affairs becoming altogether

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2 Magnesium sulphate is the precipitant used by us in the separation of the serum-globulin (containing the Antitoxin) from the inert euglobin and other non-protective proteids.

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too apparent. The commercial and scientific spirit of the times is displacing that of human kindness and consideration. The sick woman, as well as the "sick man," often needs mothering more than bossing, and the woman lacking in mother instinct should never become a nurse.

From constant association with the sick, many nurses become imbued with the idea that all sick people are neurasthenic, exacting and unreliable, and, as a consequence, pay little attention to their wishes and talk to grown-up, intelligent patients as if they were little children. The name "boss of the sick room" would appropriately describe some of our present day female autocrats.

The chief aim of too many nurses is to please the attending physician, regardless of the needs and wishes of the patient, who has to "foot the bill." To many the patient is only a case, and she cares little how he fares if only the doctor is pleased and will employ her on other "cases." We do not mean to infer that a majority, or even a very large per cent., of nurses are lacking in human heart qualities, but we know that there are too many who forget that they were women before they became (not nurses) but trained attendants on the sick. —Western Medical Review.

Avoidance of Anesthetic and Surgical Shock.

The chance of anesthetic and surgical shock may be greatly lessened or avoided by proper preparation of the patient, whereby there is secured restoration of normal activity of the liver, in particular, kidneys and skin, together with normal elimination by the bowels and correction of acid toxemia. Inadequate preparation of the patient is responsible for more deaths than operations themselves, for as a rule patients requiring operation are not up to the normal standard of health. It is hence a great risk to submit them to operation without sufficient preparation. Sulpho-Lythin, which is a true hepatic stimulant, replaces calomel in all cases where that drug is indicated, and is indispensable in the preparation of patients for operation and during and after treatment of convalescence, because it may be taken continuously without injury. Its judicious use in preparing patients for operation assists in obviating both anesthetic and surgical shock by restoring functional actiuity of the liver and excretory organs, and counteracting acid toxemia.—Chicago Clinic, May 1906.

A Substitution Peril and Its Remedy.

Like all reputable products of established worth and superiority, Pond's Extract of Hamamelis Virginica has been widely imitated by so-called preparations of witch-hazel. Investigation, however, has frequently shown that many of these substitutes are weak and worthless, and, worst of all, that in many cases they are criminally adulterated by such extremely toxic ingredients as wood alcohol and formaldehyde.

The Pure Food and Drug Law of June 30, 1906, which went into effect January 1, 1907, and under which Pond's Extract was duly guaranteed by its manufacturers and accorded the serial number 893 by the Department of Agriculture, will lessen, to a limited extent, the poison perils of the common, commercial and unidentified substitutes of the market *in so far as interstate commerce is concerned*.

Until, however, similar laws be enacted *and enforced* by *all* States individually—thus assuring the character and purity of drugs of *local* manufacture or manipulation—it is certain that the poison perils indicated can be best avoided only by confining prescriptions exclusively to a standardized product of guaranteed and invariable purity, quality and strength—such as Pond's Extract of Hamamelis Virginica—in all cases in which an extract of Hamamelis is required for internal or external treatment, and both quality and safety are the prerequisites of the profession in the medicament prescribed.

Home-Made Buttermilk.

It is now within the power of every household to have an abundance of that refreshing and healthful summer (also winter) drink—buttermilk. To the present time no one knew of any source of buttermilk except from the butter-maker; but now-a-days the butter-maker does his work so well that the buttermilk is entirely deprived of the delicious little grains of fat which add so much to its food qualities as well as to taste. True buttermilk, made direct from fresh rich milk, within a few hours, of the finest flavor and taste, nutritious and more excellent than the article as originally known, can now be prepared in any kitchen. This is done by taking a quart of fresh, rich milk, adding a pinch of salt and about a half-pint of hot water to raise the temperature to body heat, and lastly adding a tablet which contains a pure culture of lactic acid bacteria. Place all in a pitcher, cover with a napkin, and let stand for twenty to twenty-four hours at the ordinary temperature, and there is your perfect buttermilk. The tablets are made by Parke, Davis & Co., the pharmaceutical and chemical manufacturers of Detroit, Michigan, and are called "Lactone" or buttermilk tablets.

The Feeding of Infants in Diarrhoea,

Cholera Infantum, etc.

Mellin's Food is a preparation for the modification of fresh cow's milk. In diarrhoea or in pronounced digestive disturbances when milk is contra-indicated, Mellin's Food dissolved in water may be used temporarily or Mellin's Food in whey.

As soon as the stomach regains tone, a small quantity of milk should be gradually added, until the proper proportions of Mellin's Food, milk and water, adapted to the age of the child, are reached.

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On the farm, in the process of butter-making the cream is allowed to sour spontaneously and is then churned. The souring is the lactic acid fermentation caused by lactic acid bacteria or ferments. The difference between the new and old process is one of method and not result. In the old, the lactic fermentation is waited for and expected to occur spontaneously, with disappointment sometimes. In the new, the ferment in pure culture is directly planted in the milk, and the desired fermentation is secured without fail. In Bible days, spontaneous fermentation of dough was depended upon to leaven or lighten bread, and failure frequently attended the process, the dough putrefying instead of fermenting, and was then lost. Finally, man learned to add yeast to the dough and not to depend upon spontaneous processes, with the result of always securing the right fermentation and making a better and more nutritious bread. This new buttermilk process is a like improvement.—*Monthly Bulletin Indiana State Board of Health*, June, 1907.

Burns.

After thorough cleansing and disinfection of the injured area has been carried out, the choice of dressings is a large one. That which is easiest obtained and most generally applicable in the early stages is a hot boracic fomentation, which may be changed every four or six hours. Indeed, in many cases these fomentations are also the best, if there is any chance that the first cleaning is not as thorough as might be desired. On the other hand, if the first cleaning has been thorough and there is no particular factor predisposing to sepsis, a dry dressing is better, for it need not be changed so often and, therefore, the patient need not be so much disturbed. The eucalyptus ointment (B.P.) spread on lint is, perhaps, the best application; it is, however, rather expensive and some people object to the smell. A dressing composed of boric acid gr. xx. mixed in ʒj. of soft paraffin is good, but is hardly antiseptic enough, even for a well-cleaned burn. Picric acid solution (5 per cent.) may be used, but it has no especial advantage, and its staining properties make it a very difficult dressing to put on without doing damage to sheet and clothes. A very good dressing is a powder consisting of salicylic acid 1 part and boracic acid 5 parts, powdered on and covered by a piece of dry lint; but it is apt to stick and makes the re-dressing very painful; also it smarts for some time after it is applied.—The Hospital.

A profession in a French medical school who would take chances in making diagnoses after a cursory examination of a patient one day saw a man in the clinic room about whose condition he felt sure without a personal investigation. The students would not commit themselves about the man's condition.

"My dear young men", said the professor, "don't you observe the patient's barrel-like chest and the typical respiration and that the man wears a bandman's coat? It is a case of labored breathing caused by playing a wind instrument."

Turning to the patient the professor asked him what kind of instrument he played.

"I play the bass drum," was the reply.

The young medical graduate of to-day, says the medical Record, is better trained than were his predecessors of half a centtry or even a generation ago, but it may be questioned whether he is as fit to care for the sick. The study of medicine is very different from what it was in former times. Then the college was of minor importance. The student passed the greater part of his period of training in the office of some physician and took two courses of lectures in some medical college to supplement the individual teaching of his preceptor. His offiice study was eminently practical, he saw his preceptor's patients, studied their symptoms under the guidance of the practicing doctor, and learned from him how to treat them and their diseases. The knowledge he gained in this way was crude, but it was practical. When he became a Doctor of medicine he was truly a physician familiar with the multiple aspects of disease and unterrified in its presence. To-day the graduate knows much more of the theory of medicine, he is grounded in pathology and bacteriology and is well up in the symptoms and typical course of typhoid fever or pneumonia; he has attended many clinics and has heard didactic lectures without end on all the branches of medical science; but he knows patients only as cases—with the individual sick man he has no acquaintance whatever, This lack must be supplied by a course of internship in some hospital. and no one to-day thinks of entering upon the practice of his profession without this indispensable training, if it is possible to obtain it.

At the last meeting of the Philippine Islands Medical Association, says a correspondent of the Medical Record, Dr. Tee Han Kee in a paper entitled "Surgery Among the Chinese," said, for extracting a fish bone from the throat, the saliva of a dog was used which had been taken while the dog was hung upside down, the theory being that dogs being able to digest bones it was thought that the saliva had a beneficial effect.

Death Following Atrophy of the Salivary Glands.—Zagari (Policlinico) describes a rare case of functional disturbance of the salivary glands, to which he finds no analogy in literature. This case he believes may serve to call special attention to the importance of the salivary glands in the general economy of metabolism.

The patient was a woman, aged 50 years, who suffered from an increasing dryness of the mouth until the secretion of saliva entirely disappeared. The immediate results were of course manifest in the processes of mastication, deglutition and articulation. After six or seven months the sense of taste completely disappeared on the anterior one-third of the tongue on both sides. In spite of this the patient felt strong, had a good appetite, and digested her food normally. Emaciation began to take place slowly, however, in spite of plentiful feeding and the administration of cod-liver oil. On account of a suspicion of syphilis, a specific treatment was tried, but without result. Death followed from marasmus after two years and four months.

The author concludes, after clinical observations and experiments upon animals, that there is a *nucleus salivaris* or *nucleus gustationus* in the upper part of the medulla. A lesion of this center, of a syphilitic or parasyphilitic nature, in this case affected the neuron which, through the chorda tympani, acted on the salivary glands. The results were lack of salivary secretion because of atrophy of all the salivary glands, parotid, maxillary and sublingual, and loss of the sense of taste on both anterior thirds of the tongue. The increasing emaciation and marasmus were caused by lack of the internal secretion of the salivary glands. That such a lack of internal glandular secretion can cause severe cachexia and degenerations the author states is well known. However close theory and fact may come in this case, consideration of it is not without profit.

Thyroid Deafness.—King (Brit. Med. Jour.) describes a case of deafness in myxœdema in a man aged 56 years. The patient had suffered for the past four years of myxœdema, improving each time after thyroid treatment. Before this trouble began his hearing was normal, but with advance of the disease, complete deafness came on. Treatment with thyroid preparation caused

the deafness to improve simultaneously with the other symptoms.

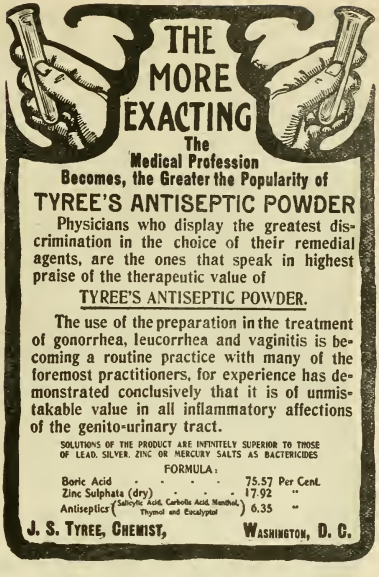
Morphological Diagnosis of Pathogenic Protozoa.

In the New York Medical Journal Ewing notes that the great point of disagreement among zoologists is not so much with reference to the existence of a certain protozoon, but with reference to the right of certain intracellular bodies to be included in the cycle and the relation of one set of forms to another. This matter has come up especially in the search for protozoa in cancer, rabies and the exanthemata. The mere recognition of protozoa may be an easy matter, but the identification of cellular degenerative products is most difficult. Ewing's object is to urge that serious dangers are inherent in the mere morphological diagnosis of protozoa in diseased human tissues, and he declares that the collateral evidence must be favorable before new and very peculiar protozoa can be established as the cause of disease. The great danger surrounding the morphological diagnosis of protozoa in human tissues lies in the fact that in many diseases, some of bacterial origin, intracellular processes give rise to structures closely resembling protozoa. This fact is then presented by the author with reference to variola, scarlatina, measles, rabies, glanders and cancer. He says that collateral evidence is almost conclusive against the protozoan origin of malignant neoplasms, since no parasitic invasion can explain the autonomy and organoid character of many tumors and there is no parallel protozoan disease anywhere in the animal or vegetable kingdom. The present state of our knowledge points to the conclusion that the virus of variola and rabies and possibly of measles is intimately connected with the tissue proteids which form the bulk of the specific cell inclusions of these diseases, but in itself of a nature not yet understood and not yet paralleled among known protozoa.

The oldest living organism in the world, says the Canadian Medical Review, seems to be a cypress tree in Chapultepec, Mexico, which is nearly 133 feet in circumference. Its age is guessed at to be 6,200 years.

The editor of the Texas Medical Journal announces:

"I have sent out every bill on my books. I need some pants."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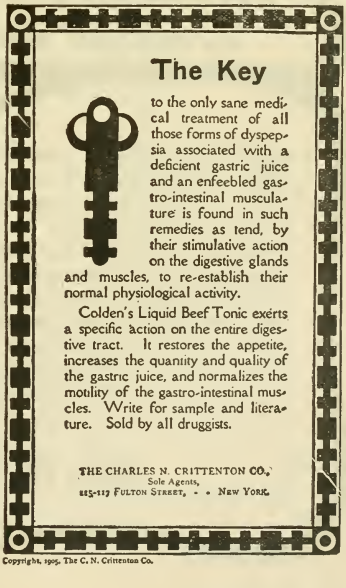
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The Unborn Child: Its Care and Its Rights.

Helme (British Medical Journal) says that we must recognize the rights of the unborn child to life; to protection from the hereditary taint of degeneracy; to health—that is, to conditions conducive to the safeguarding of the health; to nature's food (when born)—that is, its mother's milk; to its natural protection (when born)—that is, its mother's care. The recognition of these rights demands the recognition of the following duties on the part of the parents, the profession, and the State: 1. On the part of the parents: A clean and normal life before and after conception. 2. On the part of the mother: (a) The consistent regulation of her mode of life; (b) the abstention from alcohol; (c) the feeding of the child by the breast; (d) the care of the child after birth. 3. On the part of the medical profession: (a) The restriction of therapeutic feticide; (b) the education of a healthy public opinion. 4. On the part of the State: (a) Restriction of procreation to the fit, by the regulation and restriction of marriage to the fit, either by education or legislation, and by the prevention of procreation by the unfit, whether by segregation of the unfit, or sterilization of degenerates, or the evolution of a healthy public opinion; (b) by regulation of the life of the pregnant woman by State provision of food for the necessitous, by provisions of hospitals for the reception of women during pregnancy, and by State prohibition of woman's work and employment during pregnancy; (c) immediate registration of stillbirths, premature labors, abortions, and, if practicable, pregnancies; (d) registration of birth within twenty-four hours; (e) regulation of the life of the woman who has given birth to a child by State provision of food for the necessitous, and by State prohibition of woman's work for at least six months after confinement.

The Effect of Metals on Gastric Mucosa.

Bickel (Berliner klinische Wochenschrift) found that metallic iron, metallic magnesium, metallic aluminum, metallic manganese all caused an abundant and continuous flow of gastric juice as long as they are in contact with the gastric mucosa. He explains their action by the fact that they are decomposed in the presence of a weak solution of hydrochloric acid; during this process of decomposition hydrogen is set free, which then stimulates the flow of gastric juice. The freshly secreted hydrochloric acid in turn keeps up the decomposition of the metals, and thus the process goes on until the metal is either entirely decomposed or washed out of the stomach by the increased quantity of gastric juice. That hydrogen is the real cause of the increased gastric flow is proven by the fact that metals, such as tin, bismuth, gold, and silver, which hardly give off any hydrogen when brought in contact with weak solutions of hydrochloric acid, do not increase the flow of gastric juice when put into the stomach. The knowledge of the action of metals on the stomach he considers of practical importance, since Klemperer and others use escalin (metallic iron, manganesium, and aluminum) as a substitute for bismuth in the treatment of gastric ulcer, a mode of treatment which increases the flow of hydrochloric acid when large amounts of the latter are in reality undesirable. On the other hand, these metals can be used successfully in conditions where an increase of gastric juice is wanted.

The Cause of the Absence of Phagocytosis

Weil and Tsuda (Berliner klinische Wochenschrift) carried on extensive experiments to ascertain what could prevent test tube phagocytosis. They used only the hay bacillus, the staphylococcus, and the dysentery bacillus, all of which cause a marked phagocytosis in the presence of guinea pig serum and leucocytes. Their experiments proved (1) that this phagocytosis of the dysentery bacillus by the leucocytes was prevented when dysentery-aggressin was added; (2) that phagocytosis was absent only in the presence of the dysentery bacillus, for it took place when staphylococci and hay bacilli were added, in spite of the dysentery-aggressin, showing that the action of the latter is specific and that the aggressin does not poison the leucocytes; (3) that the absence of phagocytosis is not dependent on the absence of opsonin, for it does not take place when the bacteria exposed to the aggressin are loaded with opsonin; (4) that aggressin is the cause of the absence of phagocytosis and that it protects the bacteria in the same way as the capsule of anthrax protects it against phagocytosis.

Spontaneous Rupture of the Rectum.

Heinecke (Munchener medizinische Wochenschrift) adds the history of another case of spontaneous rupture of the rectum to the few recorded in medical literature. The patient was a man forty-five years old who for four to five years had experienced a prolapse of the rectum at stool, which he could always easily reduce. For some time he had been troubled with constipation and occasional bloody stools. The morning on which he came under Dr. Heineck's care he was seized with a sudden tearing pain in the lower part of the abdomen while in the act of moving his bowels; at the same time a few loops of small intestine protruded

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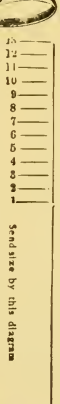

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from the anus. The abdominal pains, at first slight, were very intense when the patient was admitted to the hospital six hours after he first experienced them. By this time he had begun to vomit, and examination showed a rigid, distended and tender abdomen, while about one meter of small intestine with its mesentery was found protruding from the anus. The gut was dark blue in color and the mesentery was full of hemorrhages. A prolapse of the rectum was not found. After the small intestine was thoroughly cleansed and placed into the rectum, the abdomen was opened. Some cloudy fluid was found free in the peritoneal cavity, and after exposing the rectum a tear was found in its anterior wall extending upwards for five centimeters from the bottom of the rectovesical fossa. The intestine protruding through this opening was replaced into the abdominal cavity and the latter irrigated with salt solution, after which the rectal and abdominal wounds were closed without drainage. Two days later the patient died of a septic peritonitis, which was confirmed at autopsy; the latter showed nothing else of interest outside of a loosely fixed rectum. The history of this case is similar to the majority of the twelve reported in the last eighty years. The increased intra-abdominal pressure caused a prolapse of the rectum and also forced the small intestine into the blind pouch of peritoneum in front of the inverted rectum; when the pressure became too great the rectum tore and the small intestine prolapsed, while the rectum reduced itself spontaneously.

Cystitis in Nurslings.

Caccia (Rivista di Clinica Pediatrica) considers that cystitis is comparatively frequent in nurslings, but is not usually recognized, being confounded with the effects of disturbances of digestion or other childish troubles. Its causes are various and include the same factors that produce it in adults—catheterism, infective diseases, etc. It results from fever, profuse diarrhœa, cold, uricemia, arthritic diathesis, poisons, urinary stasis, and tuberculosis; from the gonococcus rarely, and from other bacterial agencies. There is one form that especially interests the author, that resulting from the presence of *Bacillus coli* in the urine. In female children these germs may be introduced from the vagina; in males when phimosis exists. In this case the infection is ascending. It is not probable that it often is of hematogenous origin and the author discards the theory of passage through the intestinal walls. The author has observed the disturbance in fifteen cases, six males

and nine females. In all the males there was phimosis, and this is regarded as an important factor. The symptoms are fever, pain, nocturnal enuresis in cases in which the pain causes the urine to be withheld during the day, turbid, acid urine, containing agglutinated leucocytes and bacteria, odorless, and with small amount of albumin. The disease when not treated generally is cured spontaneously after a time, so that the prognosis is good.

Hyperemesis Gravidarum.

Tuszkai (Berlin Klin.) refers true hyperemesis gravidarum to irritation of the peri-metrium, due to overstretching and to consequent improper nutrition of the peritoneal coat. The doctrine of peritoneal irritation as a cause of the vomiting he thinks is rational since the reflex paths are simple and direct. That excessive vomiting is not always present in large pregnant uteri, such as those of multiple gestation and hydramnios, he explains by the assumption that the elasticity of the peritoneum differs in different cases. That it occurs most commonly in the first half and seldom in the latter half of pregnancy he accounts for by the fact that the uterus increases tenfold in the first four and a half months and only doubles its size in the remaining period.

Consistently with this theory it is assumed that an antecedent metritis or peritonitis may be a predisposing factor.

Distinction must be made between the vomiting of pregnancy and vomiting during pregnancy. The former is exceedingly rare. Non-specific vomiting may ensue from toxemia of intestinal origin, affections of the stomach, meningitis, peritonitis and other organic diseases.

Williams' views with reference to the value of the ammonia coefficient the author rejects. In two cases under his observation the ammonia coefficient was estimated. In one the coefficient was 4.1 per cent., in the other it was high, but did not fall after the vomiting had ceased.

Diagnostic evidence of specific hyperemesis in pregnancy is undue sensitiveness of the peritoneal covering of the uterus as revealed by bi-manual examination.

Treatment consists of local applications of heat or cold, rest and the free use of opium. The pregnancy is terminated if these measures fail.

Vagal and Vaso-Vagal Attacks.—Gowers (Lancet) in a recent lecture on "Vagal and Vaso-Vagal Attacks" describes a condition which, although rare, is possibly met more frequently than recognized. The designation "Vagal attacks" he gives to those prolonged seizures, the symptoms of which consist chiefly in disturbance of some of the functions of the pneumogastric, for the most part sensory and subjective. With the vagal symptoms there is often combined a slight mental change, and also disturbance of the vaso-motor centre, causing constriction of the vessels and coldness, especially of the extremities. Associated with the latter may be some sensory impairment and sometimes also a slight form of tetanoid spasm. These features vary much in relative proportion, so as to often obscure the relative resemblance. When the vaso-motor spasm preponderates the case may seem to differ from the type more than it really does. Such cases may be termed "vaso-vagal." The attacks are never really brief; they seldom last less than ten minutes, and more often continue for half an hour or more. There is a sudden onset of slight symptoms, rapidly increasing, and the end is gradual. The seizures recur at varying intervals, often for months or years.

Though these attacks are met in men, they occur most frequently in women, and this, coupled with the fact that the pneumogastric and vaso-motor systems are readily influenced by emotions, has probably led to the submergence of these attacks beneath the vague conception of hysteria, a conception which conceals whatever it covers.

A brief description of the symptoms may be considered. The vagal symptoms are chiefly sensations referred to the stomach, the respiratory system and the heart. We may probably ascribe to the gastric nerves a sensation referred to the epigastrium, described as a sense of oppression or fullness, but often indescribable. It begins suddenly, irrespective of the state of the stomach or of its functions, and often seems to ascend to the chest, though very rarely to the throat or head, as does the aura of epilepsy. There is seldom nausea and never vomiting. Even more common, especially as an early symptom, is a sense of respiratory distress, of difficulty in breathing. It is sometimes so intense as to amount to orthopnœa, and compel the sufferer if lying to sit upright, although there is no corresponding sign of impairment of breathing. With this may be combined cardiac symptoms, discomfort, acute pain in some cases, followed by rapid action. With the dyspnœa, or the cardiac sensation, or both, is often associated a sense of impending death, so intense that no recollection of its falsity in preceding attacks prevents the conviction of its present reality. It naturally causes alarm, but apart from this there is sometimes a sense of intense fear and dread, which is recognized to have no adequate cause.

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mental state is common, and may even be the first symptom. It is generally described as a difficulty or slowness of mental operations, a difficulty in thinking or in concentrating attention. Trifling as it may seem, it always begins suddenly and strikes the patient as a state quite unlike the normal condition.

The vaso-motor spasm sometimes attains a high degree. To it the symmetrical coldness is certainly due, for the pulse becomes small at the same time. When general there is pallor of the face. Shivering is common and may amount to a definite

rigor, but this occurs when the coldness is beginning to lessen. With the coldness of the extremities, tingling and numbness in them are often described.

In the treatment from such attacks it is essential, of course, to discover any defect in the general health, and to remedy that. Constipation, with attending indigestion, is often a harmful influence. The patient should be freed from all causes of overfatigue. With an epileptic element much good can come from the administration of the bromides in moderate doses, combined with belladonna or digitalis. But in all cases where there is vaso-motor spasm, the regular administration of nitroglycerine is by far the most effective agent. Taken regularly, although no effect may be perceived from it at the time, it seems to exercise a permanent, steadying effect on the vaso-motor centre. Strychnine may be combined with it to advantage, one patient describing it as "working like a charm" when he had been left free from any tendency to these attacks, which had gone on for eleven years. The author presents eleven instructive cases to illustrate this condition.

Fehling Test for Sugar.—McLean (British Medical Journal) enumerates and explains the action of the different substances in the urine which interfere with the Fehling test or give an ambiguous reaction. In regard to the general significance of these ambiguous reactions he says that every urine contains a certain amount of sugar which is prevented by the creatinin present from giving any reaction with the Fehling test. Concentrated to half the amount, and containing consequently half the amount of sugar, such a specimen would give a doubtful Fehling reaction. He advises in doubtful cases, where the specific gravity is high, that it be reduced by the addition of water to about 1015.

In urines containing a slightly higher percentage of sugar than normal the important point, of course, is to determine how much urine is passed per diem, and so obtain a clue as to the total sugar passed. An ambiguous reaction with Fehling's test in the urine of an individual passing less than 1000 c.c. per day would obviously have a different significance to that of a urine giving a somewhat similar reaction, but of which the daily average amount was nearly 2000 c.c., or even over this. In a case giving a modified reaction with Fehling's test after dilution it is always advisable to postpone a report until a future examination can be made, for it seems certain that the presence of small amounts of sugar in urine in quantities above the normal is often caused by factors which have very little direct bearing on the probability of life. The amount of exercise taken, the quantity of carbohydrate eaten, working or sitting in badly-ventilated rooms or offices, temporary feverish or mentally-disturbed conditions, alcohol, etc., all tend to cause a slight increase in the amount of sugar, excreted in the urine of many apparently healthy individuals.

Again observation proves that sugar may be occasionally present in the urine of healthy people without any apparent cause, and that the power of assimilation of carbohydrates may vary within fairly wide limits, not only in different individuals, but in the same individual. The important point to consider is whether, with ordinary diet, the urine always contains a small excess of sugar. If it does so, the case is suspicious. If the sugar is of but temporary occurrence it can be said that in the majority of cases its presence is of no importance. This temporary increase of sugar is often observed in cases of mental disturbance.

The fact that every urine contains a certain amount of sugar, that the amount normally present varies with different individuals and probably for the same individual, and that the test is at best but a relative one, indicates that the occurrence of an ambiguous reaction in a concentrated urine is generally of no clinical importance, and though largely due to carbohydrates, does not usually indicate an abnormal condition. In urines of low specific gravity these ambiguous reactions do generally indicate a slight excess of sugar, but its probable bearing and importance can only be ascertained by watching the case, and by repeated examination of the urine at short intervals. In many cases it will be found to disappear and give no further trouble; in a few it may show the starting point of a true diabetes millitus, and in such cases early detection of the true condition is exceedingly important.

Pulsus Paradoxus.—Williams (British Medical Journal) states that the so-called pulsus paradoxus, or undulations in the force and frequency of the pulse synchronous with respiration, has been noted in various conditions. It is a question whether these respiratory undulations are due to respiratory pump action acting on the heart and intrathoracic vessels or to nervous impulses influencing the heart and vessels; in other words, are they myogenetic or neurogenetic, or both? From examining large numbers of school boys, the writer soon learned that, so far from indicating an abnormal condition, well marked respiratory undulations in the pulse implied that the boy would be good at running and other

outdoor sports. The pulsus paradoxus so frequently observed in acute dyspnœa from laryngeal obstruction, is probably merely a pathological exaggeration of a physiological condition. During an inspiration the pressure around the heart and all intrathoracic vessels is considerably less than that of the atmosphere outside the chest. The negative pressure affects the thin walled elastic veins, containing blood at relatively low pressure, more than the thick walled arteries with their contained blood at relatively high pressure, hence the veins are dilated by the increased amount of blood driven into the chest from the systemic veins. But the same negative pressure aids the flow of blood to the right heart leading to a stronger ventricular contraction, or at least to a larger amount being ejected, and consequently more blood reaches the left ventricle, and more blood escapes by the aorta, so arterial tension rises. With obstructed inspirations a still greater but similar effect is produced, for the negative pressure which increases the capacity of the lung reservoir can only do so by dilating the vessels, thereby correspondingly facilitating the onward flow of blood to the right heart, and from the right ventricle (though the negative pressure, even apart from any pericardial adhesions, etc., will have some tendency to interfere with contractions, and to aid the diastole of the cardiac cavities). Thus an inspiration first widens the pulmonary vessels and increases the lung reservoir capacity; but, secondly, by lessening resistance, it increases the rate of flow through the pulmonary vessels. But this pump action is not the sole or most im-

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portant factor in the production of respiratory pulse variations, as is shown by the fact that section of the vagus nerves does away with such variations. In children, as compared with adults, the spinal centres are unstable and the reflexes over active. Hence in young individuals, although their chest walls are more pliable and less fitted to overcome atmospheric pressure on deep inspirations, the bulbar centres are very prone to obviously affect the frequency and force of the pulse; and when the larynx or main bronchi are obstructed the forcible inspiratory impulses often result in the so-called pulsus paradoxus. That these effects on the pulse are wholly due to cardioinhibitory or vasoconstrictor centres is hardly possible, but they are certainly the dominant factors.

Banti's Disease.—Rummo (La Riforma Medica) devotes considerable time to the study of the symptoms of Banti's disease, especially in the prearctic stage. He divides the signs of this stage into two classes, the fundamental symptoms and the accessory symptoms, and tabulates them as follows: The fundamental symptoms are three in number: First, the reduction or increase in size and consistency of the liver, which goes on progressively. Second, a beginning venous engorgement of the upper part of the abdominal wall; and, third, the presence of signs of hepatic insufficiency. The latter consist in disorders of the biliary function, such as the presence of an excess of biliary pigments in the urine, the development of cholæmia, etc.; the lowering of the amount of urea excreted, the appearance of glucose or lavulose when these are administered in the food, etc. Among the accessory symptoms are hæmorrhages from the nose, the gums, the stomach, and the intestines; pain over the liver; gastrointestinal disturbances and œdema of the lower limbs. In speaking of the treatment of Banti's disease, he mentions in the first place splenectomy. According to Ferranini, only 38 per cent. of recoveries are obtained with this method. A better prognosis may be made for the success of the operation when the disease is attacked in the prearcitic stage. The reason of the many failures is that the diagnosis of the disease cannot be made readily unless the liver is already involved to a considerable extent. In the prearcitic stage, or when there is incipient cirrhosis, we should always advise splenectomy if the physical condition of the spleen permit. If we have a case of primary enlargement of the spleen, with an atrophic cirrhosis sufficiently marked, we should advise splenectomy associated with Talma's operation. When there are diffuse œdemas, marked dropsy, and other advanced symptoms, we should not attempt operative treatment, but should confine ourselves to palliative measures. Iron, arsenic, strychnine, and phosphorus may be given internally in an attempt to improve the blood, but our attention should be especially directed toward the liver, by attention to the diet, the administration of iodides, etc. Parcentesis should be performed at intervals when the quantity of liquid threatens to impede respiration and heart action.

Rectal Injections in Peritonitis.—Moynihan (Lancet) has given a thorough trial to the method of treating diffuse septic peritonitis by means of the introduction of large quantities of fluid into the rectum, and concludes that there are few recent therapeutical measures equal to it in value. He has thus treated nineteen consecutive cases of general peritonisis due to appendicitis, with but two deaths, and feels that several of the patients recovered solely because of the continuous administration by the rectum of saline solution over a period of two to four days after the operation. He also found the procedure of great value in cases of partial and complete gastrectomy. He uses a rectal tube one foot in length, made of pewter, and with a slightly bulbous extremity. It is perforated at the ends and on all sides, so that fluid can easily pass in, and flatus pass out. The tube is introduced about two or three inches, and at the anus is bent sharply so as to lie easily on the bed. It is connected with the flask holding the saline solution by means of a long rubber tube. The flask is immersed in a bath of hot water, kept at the proper temperature by means of a lamp. The best temperature is from 100 degrees to 102 degrees F. If it is hotter than this it is not retained well. The flask should be elevated so that its base is from three to six inches higher than the rectum. The saline begins to flow and continues to flow at the rate of about a pint an hour. If a feeling of tightness or distress is caused the flow is too rapid. If the rate of flow be properly regulated and the temperature of the fluid not altered, from seven to ten pints can be introduced without interruption. If the fluid acts as an enema, the tube can be replaced after the bowels have acted. Care and constant attention on the part of the nurse are necessary to make the administration a success. The change in the appearance of a patient who is absorbing fluid so rapidly is very remarkable. The pulse improves, the eyes grow bright, urine is passed in large quantities, and the skin becomes moist. The patient's aspect is one of comfort and contentment.

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In favorable cases they make the contractions painless, and these go on more strongly and quietly until delivery is accomplished. The patient has no feeling of pain and no remembrance of the labor, sometimes insisting that she has not been delivered and the child is not hers. The woman is not able to control the abdominal pressure, and it is very difficult to protect the perineum. Pressure on the abdomen may be necessary to aid expulsion, on account of weakness of the contractions. The effect on the friends of the patient of the red, congested face, the restlessness that is sometimes seen, and the inability to rouse the patient to natural consciousness is disagreeable, and hence this form of anesthesia is not well adapted to the delivery of cases in private practice. Another difficulty is that the physician must be present and ready to give aid during the entire labor, not leaving the patient at any time to the care of the nurse or midwife. The child when delivered does not cry lustily, and is sleepy, and even stupid. This passes away in about ten minutes, but occasions some anxiety. The author concludes that the effect of scopolamin-morphine is not regular, and every case must be carefully watched throughout its course. Its use is not adapted to all cases of labor, and only primiparæ with normal pelves and strong pains should be treated thus. It is not altogether without danger for mother and child, and is not adapted to private practice.

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Cholera in Russia.

The sanitary authorities in Prussia are, it is reported from Berlin, watching with considerable concern the news indicating that chotera is spreading in Russia. The authorities have ordered a strict sanitary inspection of all vessels and rafts entering Prussian territory by the Vistula.—Medical Record.

Andrew Lang became an ardent believer in the existence of a disease called influenza after he had suffered an attack. "No man," he said, "however credulous, can believe in everything, and I 'took the Wilkes and Liberty' to suppose and assert that there is no such thing in nature as influenza. My causes of scepticism were the usual causes. I never had suffered from influenza. No house in which I ever found myself was haunted by the alleged malady. I was wrong, and am now in case to appreciate an argument of the Chinese medical profession. These learned men believe in demoniacal possession. When their European confreres say, 'Oh, you mean epilepsy, hysteria, and so on,' the Chinese reply: 'Excuse us, we don't! We know all about hysteria and epilepsy, at least as well as you do; but demonical possession is quite another affair, with peculiar and distinctive symptoms.' That is also the case with influenza. It may resemble a common cold but its distinctive symptoms, as in the parallel affair of diabolical possession, are unmistakable. Indeed, I rather think that diabolical possession and genuine influenza are much the same thing. Influenza at once attacks the human mind, and produces the queerest phenomena. Certainly under the dominion of this fiendish malady I exercised mental faculties of a kind which I do not possess when I am in ordinary health. A critic, the late Mr. Henly, I think, once asked, 'What could not Mr. Lang do if he only had genius?' Nobody was able to reply, but when I had influenza I had genius. Unluckily, there was no money in it, and I would rather be devoid of genius than have it with influenza thrown in; inspiration is all very well, but one may purchase it at too high a price."

On Doctors' Sons.

Doctor's sons pretty generally make good doctors; that is, if they decide to study medicine and be doctors at all, they succeed. When you hear a physician say that the practice of medicine is a dog's life, and that if he had it to do over again he would never study medicine, that patients are ungrateful and give him little thanks or pay, you may be pretty sure that his son will not study medicine; and if perchance he should, he is terribly handicapped by a lot of bad medical traditions. The unsuccessful doctor does not let his son study medicine. The doctor's son who does study medicine is quite invariably the son of the man who was successful enough to find joy in his work, and who could wish his son nothing

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better than to enter into the calling which had meant so much to him. And the boy saw in his father's life something that excited his admiration to emulate and covet. As a matter of fact and observation the son of the really successful doctor commonly does study medicine; and I can name a number of such men who attained to even greater success than their fathers.

However, the decision as to whether a man is successful or not does not rest with you or me—the decision is with him—he is the only one who knows.

That the doctor's son takes his cue from his father, and that the father should be careful of what he teaches his son, even inadvertently, is illustrated by a homely example. The one man in this country, who is devoting himself assiduously to columniating and misrepresenting medicine, is the son of a doctor—a well-meaning man, still engaged in mildly practicing his profession. This good old doctor is a frequent contributor and a professed admirer of one of the most disreputable medical periodicals charged up to the account of American medical literature—let us be accurate and say *the* most disreputable. That means that the son gets an impression of medicine from the literature which he finds on his father's library table. I presume that the son judges that this so-called medical journal represents the medical profession because it says it does and because it contains the pictures of many men of good and high standing who intersperse its advertising pages with the products of their agile pens, innocently and little knowing of the damage they are doing.

A certain publican was once asked by a philistine how far back he could trace his ancestors. He replied that he did not have time to see how far back he could trace them because he was too busy tracing the doings of his descendants.

What useful lesson may we learn from these observations? Simply this: Keep an eye on the boys.—N. Y. State Journal of Medicine.

Movable Kidney.—Bishop (Lancet) states that true floating kidney—that variety which possesses a mesonephron and is entirely surrounded by peritonæum—is a thing of great rarity. In searching through the literature of the subject he has only found three undoubted specimens. The majority of cases fall into the category of "mobile" or "wandering" kidney; they are not surrounded by peritonæum, and their excursions take place entirely behind the parietal peritonæum in the loosened subperitoneal connective tissue. On only four points are all writers on the subject agreed. These are: 1. That such a condition does actually exist. 2. That this condition exists more frequently in women. 3. That it is most frequently seen on the right side. 4. That it is frequently associated with neurasthenia. There is marked disagreement as to the frequency of the condition, and as to its importance. Whatever view is taken of the causation of wandering kidney, it is evident that the factors producing the displacement act unequally upon the two equally important segments of this part of the urinary apparatus, the kidney itself and the peduncle composed of its ureter and the vessels passing to it from the aorta and vena cava. Whether loss of supporting fat, alterations in the incidence of intraperitoneal pressure, or undue traction upon the lower end of the ligamentum suspensorium renis, all will act with much greater and more immediate force upon the kidney itself, and it will only be after these factors have been in action for some time and have begun to be reinforced by the added weight of this organ, that any alteration will be perceptible in the attachment of the ureter to the spinal column or in the length of the vessels. Two stages in the descent of a "wandering" kidney are therefore predicable from the very conditions present, and the history of reported cases proves not only that such stages do occur, but that they are easily recognizable, the symptoms present in each being markedly different. In the first stage the kidney itself tends to sag downwards, the lower pole becoming recognizable by the examiner's hand on a lower and more median plane than normal; the vascular peduncle being, however, of a normal length, the actual position of the organ will be that of the resultant of the two forces acting upon it—loss of support, aided by any other force pulling downwards, and the inward pull of the vascular and ureteral peduncle; it will consequently rotate in the line of a curve, the centre of which will be the most fixed point of its attached vessels; this is the stage described by Morris as a distinct variety, the "cinder shifting" variety. The symptoms of this stage are such as might be expected from the mechanical condition; the bend produced at the junction of the renal pelvis with the ureter, produced by the rotation of the kidney, will interpose a distinct obstacle to the due evacuation of urine from the renal pelvis and the renal intrapelvic distention so caused will result in aching and tenderness in the renal region of the affected side. If the bend be an acute one and somewhat suddenly made, Dietl's crises will be present; these depend not only on the ureteral obstruction, but

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also, and perhaps mainly, upon the kinking or twisting of the renal veins which necessarily accompanies it; these crises are characterized by violent attacks of colic, attended by nausea and vomiting, possibly abdominal distention and tenderness, sometimes by a rise of temperature and collapse. Digestive disturbances, nausea, dyspepsia, vomiting, and jaundice have been frequently observed. Almost all the symptoms of the first stage are of an acute type. In the second stage, owing to the persistent downward traction, the attachment of the ureter to the spinal column becomes looser, is elongated, and permits more range of movement. At the same time the blood vessels elongate and become less firmly attached. Kinking of the ureter is much less likely to occur, and if it does occur is much more easily overcome. Pain is no longer sudden and acute; there is rather a feeling of weight and discomfort in one loin with a sensation of dragging, stiffness in the back, some cramp in the abdomen, and backache. All these symptoms are increased by exercise. Digestive disturbances are common in this stage. The presence of calculous deposit in the renal pelvis as a complication greatly intensifies the pain. The author describes a new operation for the fixation of floating kidney, in which the lower segment of the renal capsule is stripped off and attached to the abdominal wall. Sutures are also passed between the renal pelvis and the site of attachment of the renal peduncle.

Treatment of Constipation.—Lewandowski (Ther. der Gegenwart) considers the later theories regarding the cause of chronic constipation, and bases his treatment upon these theories combined with the knowledge gained from his own personal applications of them. Kohnstamm's theory fixes the cause for chronic constipation as due to a substance derived from the decomposition of albumin which decreases the peristalsis. He therefore limits or interdicts the use of meats. The author admits the plausibility of this theory, but says that it cannot be accepted on account of the fact that the clinical experience proves that it is not constant in all the cases. He maintains that the chemical cause of constipation therefore has not been established. A. D. Schmidt has advanced a mechanical theory. This theory depends upon the absence of an indigestible residue for the cause of constipation. When, for any reason, there is not enough residue left in the large intestine to stimulate peristalsis by the mechanical irritation, constipation will be the result. He has used this theory as a basis for his treatment with Regulin and Pararegulin. These preparations are cascara agar solutions, which depend for their efficacy on their property of greatly increasing in volume by the assimilation of water. Strassberger's theory places the cause of constipation upon the decreased number of bacteria which he found present in the feces of obstipation. The author agrees with Klein that all organic causes and constipation due to primary diseases in other systems must of necessity be excluded by diagnosis. He mentions the fact that insomnia is one of the most common symptoms of chronic constipation. This is due to intestinal unrest and distention, and is usually relieved by the treatment of its cause. Disturbance of the circulation of the large intestine is an exceedingly common cause. Of eleven hundred patients he attributed the cause to dilated veins and capillaries in 153 or 17 per cent. This is found to be present more frequently in men than in women and more often in those suffering from obesity. He agrees with Boas that varicosities of the veins, especially about the rectum, are a predisposing cause for carcinoma in that region. The treatment of obstipation is divided into two parts; (1) The material to be given to the patient, and (2) the manner of giving this diet in the proper way and time. It is self evident that eating slowly, proper mastication and dissolution with saliva, besides the hygienic care of the mouth and teeth, are to be first considered. An important matter concerning the diet is the personal idiosyncrasy that different people have for different food stuffs. For example, mother's milk produces in some infants constipation, while in others it produces diarrhea. This holds true in adults with cow's milk. An addition of salt or sugar, cooking the milk a longer or shorter time, sterilization of it, or drinking it hot or cold, or other modifications may influence its effect some, but usually only slightly. Cocoa and coffee produce mild colics in some people. This much neglected personal effect of food stuff upon the individual should always be inquired into and cannot be ignored in any of the chronic cases. In persons suffering from obesity, instead of reducing the fluids it is better to institute smaller meals and more solid diet given at shorter intervals. The author agrees with Boas that in these patients, as well as others, suffering from conditions modifying the position of the abdominal organs (pregnancy, perineal lacerations, neurasthenia, emaciation) that rest cure is indicated and produces very favorable results. Besides the quality of the diet, the time and amount must be specified. Some food stuffs should be taken in the morning, others at night, some with and some without water, etc. This also holds good with medication. In

general substances which increase peristalsis are more effective if given when the stomach is empty. Those substances which increase peristalsis by mechanical irritation of the intestines are only slightly different from an ordinary stimulating cathartic. Under this head are Regulin and Pararegulin. They are indicated in patients confined to bed in whom a soft semi-solid diet is to be given; for example, ulcer of the stomach during and course of appendicitis. Schmidt's method of giving with them apple sauce and potato soup can be recommended. Other vegetables and fruits are also indicated. This method is also very beneficial with fat people. The ordinary cathartics are considered necessary evils. If they are used at all they should be changed frequently so as to retain their effect. Enemas, on account of their decreasing effect, are considered useless in the chronic cases. Among the many beneficial non-medical procedures are massage and gymnastic exercises. Abdominal massage while the diaphragm is fixed by forced inspiration is considered very helpful. Gymnastic exercises as described by Schreber and Hughes are the most valuable. Hydrotherapeutic measures are best carried on in the sanitarium. They consist of hot and cold packs and slapping, hot and cold sitz baths, and local sprays and douches. In order to encourage proper local circulation, restricting clothing about the waist and pelvis should receive attention. Psychotherapy is indicated in special cases. Flatulent colic (colica flatulenta) should receive special attention. This occurs in two varieties, the acute and the chronic. In the acute form the symptoms are pain and distention of the abdomen. A characteristic hot burning painful sensation in the lumbar region, which is considered pathogenic by the author. Besides these symptoms, anorexia, nausea, and belching are complaints. A small pulse and a slight increase in temperature is usually present. Occasionally peristalsis is easily demonstrable. No meteorism or other abdominal findings are present. The treatment consists in absolute rest, hot compresses to the abdomen and lumbar regions. Fluids in the form of lemonade, and mineral waters should be given in large amounts. The ordinary carminatives have no effect on the condition. Cathartics and enemas are absolutely counterindicated. Under the above treatment the symptoms usually subside in six to eight hours, and the patient is absolutely comfortable. The acute form usually comes on very suddenly, in people who rarely suffer from obstipation. It is frequently found present with heart disease. Symptoms are insomnia, pain in

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the abdomen and back, frequent desire and effort to defecate without effect, anorexia, and colic of a more or less severe degree. The treatment is as follows: Diet is the most important. Small, frequent meals interdicting foodstuffs which do not agree with the patients is the best general rule. Lemonade, hot tea, peppermint, kimmel, annis, fennel, etc., are indicated. Hot applications to the abdomen help to relieve the symptoms. Oil per mouth and in difficult cases lavage of the stomach usually produce the desired effect. In those cases of constipation due to a mechanical or anatomical condition, for example, a chronic localized peritonitis following appendicitis, salpingitis, parametritis, injections of thiosinamin is considered the best treatment.

Causes of Colitis, with Special Reference to Its Surgical Treatment.

Lockhart Mummery (Lancet) presents a tabulation of thirty-six cases under the headings of sex, age, symptoms, duration, and conditions found. In several cases no cause whatever could be ascertained. A large variety of lesions were respectively present in the other cases. In a group of five cases cancer of the sigmoid flexure was present, in quite a large group catarrhal inflammation was observed, showing varying degrees of congested mucosa, hypertrophy, small polypi, papilloma of rectum with malignant base, ulcerations, etc. The author has found this latter group the hardest to cure, although the patients are easily made more comfortable. A group of cases presented inflamed appendices. The author says we do not know exactly how appendicitis may cause colitis. He advances the following possibilities: (1) Appendicitis is generally accompanied by inflammation of the ascending colon and cecum, and in some cases this inflammation of the colic mucosa may spread into the transverse colon and even reach the sigmoid flexure. It is not uncommon during the operation for appendicitis to find that the inflammation has spread into the ascending colon. (2) Appendicitis may also cause colitis by the formation of adhesions between the appendix or cecum and the sigmoid flexure. These adhesions by interfering with the lumen of the gut either through direct constriction or by causing abnormal flexures and angles may result in a local inflammatory process being set up and the symptoms of colitis subsequently develop. The first result of such adhesions is usually constipation, to be followed in a shorter or longer time by diarrhea and the passage of mucus. (3) It would seem probable that a chronically inflamed appendix may cause symptoms of colitis by the frequent discharge of septic material into the bowel. It has become customary to describe the colon and rectum as septic channels, though there is no justification for this. As a matter of fact, septic organisms are not at all usually numerous in the large intestine and the pathogenic flora of the mouth is far more numerous than that of the rectum and colon. Even the skin is a more common habitat for septic organisms than the colon. It is not surprising therefore that a chronically inflamed appendix which is continually discharging septic organisms into the bowel may be the cause of colitis, just as we know that carious teeth and septic conditions of the mouth can cause gastritis. We have very positive evidence that removal of an inflamed appendix will in many cases lead to a complete cure of colitis.

The Coated Tongue.—A coated tongue, says Rollin (Berliner Klinische Wochenschrift) can depend entirely upon pathological processes in the mouth or nasopharynx. Aside from this, however, certain conclusions may be formed regarding the function of the stomach. In hyperacidity of the stomach one sees as a rule a dark-red, moist, clean tongue. With a lack of hydrochloric acid, however, there is a pale, thick-coated tongue. Rollin explains that in hyperacidity the blood is nourished above normal, circulation in the tongue is very vigorous, and shedding of the superficial epithelium proceeds very rapidly, whereas in an acidity there is an anemia with the consequence that the circulation lacks in force to cast off the epithelium. In spite of the many statements to the contrary it is the opinion of this author that the coated tongue may often be of diagnostic import.

Forestry is now regarded as so eminently practical, says the Youth's Companion, that the Pennsylvania Railroad Company is planting six hundred thousand seedling locust trees on its lands along the Susquehanna and Juniata rivers. In addition to raising its own ties, of the most durable wood available for the purpose, the company will have its supply so near at hand that the cost of a long haul will be saved.

Dr. Seale Harris, professor of medicine in the University of Alabama, said to President Roosevelt that he believed the negro race in this country was likely to become extinct through the ravages of disease, especially consumption. His opinion seems to be concurred in by the medical fraternity generally in the South. The death rate among the American negroes is greater than the birth rate.

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The Value of Elimination in the Treatment of Certain Forms of Epilepsy.†

By Dr. J. Allison Hodges, Professor Nervous and Mental Diseases, University College of Medicine, and Physician-in-charge, Hygeia Hospital, Richmond, Va.

If the etiology and pathology of epilepsy could be definitely determined, its treatment could be logically defined. The former, however, being uncertain with our present knowledge, the lines of treatment pursued are necessarily varied, and to some extent, empiric. Consequently, in the absence of a well established and fully verified hypothesis as to the cause of all the different varieties of epilepsy, every practitioner must be guided in the treatment of the special forms of this disease largely by his personal experiences.

In the study of the large majority of the cases which have come under my personal observation, I have been impressed with the toxic pathogenesis of epilepsy, and my experience is highly corroborative of the old conception of the disease, in which faulty chemical processes were believed to play an important and conspicuous role, for in nearly all there has been a hypertoxic underlying basis with inadequate elimination.

I am, of course, perfectly aware that this theory does not embrace entirely the causative factors in all cases of epilepsy, but am persuaded that it does in most of them, and even more frequently than we generally believe.

When the primal etiological factor shall be definitely determined, I believe that the most tenable theory as to etiology will be a condition, I shall not venture to say just what, that will be at least dependent upon deficient elimination, with the resultant toxic effects upon the nerve centres.

If this be true, then elimination is of the utmost importance.

As a general rule, we are content to employ only such remedies and measures as will afford temporary relief and ameliorate the paroxysms, and we do not, in my opinion, in general practice, give that careful and systematic thought to the avoidance of recurrences that we should.

I do not offer you any new thought along this line—the facts are well known to you all—but I would insist that we often practice least what we know best.

It is also true that every one of us practices this general method in a general manner, but we too seldom utilize it in a special way upon a special patient. I do not mean to be captious nor critical, but pointed and practical.

Believing that there are many estimable and scientific methods of treatment, I do not propose to be dogmatic, but would insist that, from personal observation and experience, the value of elimination, continuous and prolonged, in the treatment of this disease has not been sufficiently insisted upon by the average physician.

We all admit in a general way that the regulation of the primae viae is one of the essential basal principles of all well-ordered therapeutics, but in the treatment of epilepsy do we fully appreciate its real value and efficiency? I am constrai ed to say that not until recent years have I thoroughly appreciated this fact, and had its full therapeutic value firmly forced upon me.

The old aphroism: "Clean out, clean up, and keep clean," has been relegated to surgical systems for too long. This maxim is of equal, if not greater importance to the physician, and especially to him who treats epileptics.

This lesson was first taught me when I began regularly to treat my epileptic patients along special hygienic and dietetic lines; it was later more fully learned when I found that the less cause I gave a patient for autointoxication, the less frequent were the nerve explosions, and finally it was indelibly impressed upon my convictions, when, with improved methods of elimination, even more satisfactory results were obtainable.

I would not have you believe that I am such an enthusiast as to believe that this one method is a cure-all, for it is not; but of all methods and measures known to me it is the best, if conscientiously administered and faithfully and continuously carried out.

Believing that there was more of utility and value in it than could usually be obtained in intermittent office consultations and prescriptions, and wishing to test this method to the fullest extent, I chose last October from my practice, three children, two boys and one girl, all of nearly the same age, twelve to fourteen years, and sent them to my private hospital, where I do not usually take such patients at all, for a term of six weeks.

So far as I could judge from office consultations, irregular and otherwise unsatisfactory, they were nearly on a par as to the common expressions of the disease, such as

*Read before the National Association for the Study of Epilepsy, Oct. 24, 1007, Richmond, Va.

the nature, frequency, etc., of the attacks, their average paroxysms being from two to four a week, when not under large doses of the bromides.

The preliminary urinary examinations showed in each case an undue proportion of indican in the renal secretion, as well as a deficient secretion of urea.

It is needless to trace the treatment of these cases minutely, it would be as tedious to me as it would be tiresome to you, but with the exception of small doses of strontium bromide and a gradual reduction of salt in an aseptic diet complete dechlorization was secured, these patients had no medicines given except a laxative when necessary for the elimination of the various products of metabolism.

All of the other methods available, however, for the purposes of elimination were employed, such as an aseptic diet, free water drinking, moderate exercise by means of light and interesting work, walking, massage and vibration, sweating by means of the Baruch tonic bath system, and eliminative measures by aid of the sinusoidal, high frequency currents, etc.

The result was that in each case the seizures were notably decreased and the general health markedly improved. The vital and resistive force in each patient was so much improved as to be readily noticed by any one, and in the case of one of the patients there has been up to this time no return of the epileptic seizures, while the other two have suffered only slight inconvenience at long and irregular intervals.

None of them have exceeded 15 grains of strontium bromide daily, and all have continued, as best they could, the eliminative and tonic measures first prescribed. These cases cannot yet be classed as "cured," but their continued improvement after the lapse of a year argues well for the future.

It is eminently true of these cases that they were all of undoubted toxic origin, but be this as it may, it may nevertheless prove that there are many such, who, under similar ideal conditions, which are simple and accessible to all, if we only consistently carried them out, might likewise get as beneficial results. That the restrictions of the regime under which they temporarily lived was of benefit, I do not for a moment doubt, but I also claim that if we, as physicians, exercised that same "eternal vigilance" of these cases, as, for example, we do of our typhoid patients, that the conditions named above are not so difficult of employment or realization in our daily practice, and that our epileptics would be largely the gainers thereby.

Neither do I mean to prove by this inadequate test that "three soldiers make an army" and that all such patients can be thus pronouncedly benefitted, still I do believe a feather may show which way the wind blows, and, as I said in the beginning, this discussion is intended to be not dogmatic, but suggestive; not critical, but helpful.

The inefficiency of treatment in the past should, I believe, at least lend credulity to the present method of treating some cases of epilepsy, and hold out renewed hope for greater success in the future.

Prophylaxis.†

By Dr. Jno. A. Blackmon, Jackson, Tennessee.

Is it chasing a phantom to contemplate the existence of conditions in the future, when the work of the physician shall be in a great measure the prevention of disease, rather than its cure? A period when the laws, governing human life, shall be brought up to the standard of natures original laws, thus meeting the conditions causing sickness and degeneracy, by means which will place physical humanity above the plane on which the invisible causes producing sickness exists.

Therapeutics evolving into prophylaxis and the physician becoming the hygienist.

The progress in the science of medicine, hedged in by superstition and ignorance, was almost absolutely negative from the time of Hippocrates, four hundred years before Christ, until Harvey discovered the circulation in the seventeenth century. We find, however, all along the years, a spirit of investigation, but are impressed with the small results achieved.

In the thirteenth century, Moore, Esdale and Wordrof, endeavored to produce insensibility to pain, during operation, by such means as compression of the nerves of a limb, excessive bleeding and mesmerism, which, while unsatisfactory, culminated in success in eighteen hundred and forty-six (1846), in the discovery of chloroform and ether, five hundred years later. This spirit of investigation is the key to the store-house of hidden treasure. The result of past effort has acted as an inspiration to those following, and oftimes foreshadows final success. Thus Sydenham, teaching that there is in man a latent power to cure disease, forecast the modern theory of phagocytosis.

During the last decades we have been reaping a rich harvest from the seed sown by those going before us, and while they did not live to enjoy these fruits, we give them all honor for their effort to elevate the condition of humanity.

†Presidential Address to West Tennessee Medical and Surgical Association, 1904.

Checking the flow of blood by the ligature, insensibility to pain by the administration of anesthetics, relief from pus by the application of the principles of asepsis and antiseptics, enunciated by Lister, relegating to the past, gangrene, and substituting primary union in its stead, has placed surgery on very high ground, opening new fields, not only in surgery, but also in medicine.

While in surgery a prophylactic to pain and pus has been sought and found, medicine is endeavoring to find and put in operation agencies which will prevent disease, the sequela of which is placing on the surgeon's table, more victims than accident,—such for instance as gonorrhoea, with its train of surgical diseases in the female pelvis causing tubes and ovaries to be removed by the thousands, and often the uterus with its entire adnexa. Such have been the strides in this branch of medicine since the days of Lister, that the world stands amazed at its wonderful work. No part of the human body has escaped the knife as a correcting agency for the sequela of accident, heredity or pathological changes wrought by some species of microorganisms.

As we stood in the twilight of the nineteenth and viewed the coming dawn of the twentieth century, it seemed as if the veil of mystery would be lifted, and the hidden secrets in surgery would all be revealed. Major operations became minor operations and the lines of medical centers were partially obliterated. An operation formerly meant a visit to a medical center. I remember when I was a boy that a surgeon came all the way from Philadelphia to do a simple ovariotomy in the heart of Gibson county. Today there is possibly not a town or hamlet in the county which could not furnish a surgeon amply qualified to perform the same operation successfully.

This more general diffusion of knowledge and skill is the result of a higher standard of medical attainments so recently inaugurated, and so eagerly grasped by the profession.

Equipment is superior, medical literature is more abundant and of a higher type, and by the use of the telegraph and fast mail a discovery made in the laboratory today is carried to all parts of the civilized world tomorrow,—knowledge is free, and is given to all alike who will accept it.

Organization has bound the world of medical men into one great brotherhood, whose united efforts to make humanity happier is irresistable. Circumstances and conditions are combining to introduce an era of invasion against all preventable diseases, with the hope of their eradication.

Pasteur has said that "It is in the power of man to cause all parasitic diseases to disappear from the world." Why not take advantage of the situation, and be master of the occasion? Who thought before the days of Jenner that small-pox was preventable, or who before Von Behring that diphtheria was either preventable or curable; who before Manson was so bold as to assert that malaria, which means bad air, was caused by a low form of germ life, and that the mosquito was one, if not the only transmitter of the disease; who, before Finley, knew that a certain species of mosquito was the propagater and transmitter of yellow fever. Equally as mysterious was the etiological factor of typhoid fever. The bubonic plague surrendered its mysterious appearance when the flea, which was carried by the rat on ocean steamers, was discovered to be the host of the bacillus producing the disease.

Under the light of the microscope many diseases have surrendered a knowledge of their cause, which points very definitely not only to its cure, but, better still, to its prevention. Pasteur made a gigantic stride when he learned, and gave to the world, the fallacy of spontaneous generation, which teaches that the baccilli of disease are from everlasting to everlasting, and to rid man of the evils of their work he must not only be protected, but placed on a higher plane of resistance, the most potent factor in the accomplishment of which is thorough organization, which can use as an agent in prophylaxis, not only education, but legislation, the last of which should be the strongest factor in enforcing preventive measures.

To teach the people is a proposition of difficulty, yet the vastness of its importance appeals to the heart of the medical profession in terms so unmistakable and irresistable that a failure to respond with our best effort would be inhuman. The masses care nothing for the great discoveries of the past, —in fact they know very little of their suffering ancestry,—nothing further back than the age of sheep tea for measles. They do not know that at one time the excretions from the domestic animals were made into pills and decoctions and taken into the stomach for diseases, but they are intelligent and can learn the lesson written in nature, if described and explained on paper, and placed before them. They fear contagion of every kind, and when once they understand contagion and infection, the nature of the etiological factors of disease, then will we have a very able ally in this work of extermination. Teach the nature of disease, its manner of propagation, its mode of entry into the system, and something of the pathological results of its work.

Teach the resisting power, in a healthy body, also the power of a clean mind presiding over the conduct of the physical man, also the salutary influence of a correct environment, well regulated habits, especially with reference to the use of alcohol, tobacco and other narcotics, and the source of contagion, from whatever cause. Teach the omnipresence of disease germs,—impress the fact that no man is immune to disease, the possibility of infection in the healthiest subject.

Cornet, who examined a large number of persons in Berlin, found in the mouth and nasal cavity of 75 per cent. of those examined, tubercle bacilli, thus emphasizing a care regarding infection from all sources, especially by those who are predisposed to disease.

We often meet manifestations of tuberculosis in persons whose family history is entirely negative. This disease is more universally distributed over the earth than any other, and is the one about which the laity should be educated as rapidly as possible.

The medical profession is just now awakening to the vastness of its terrors.

Koch, in 1882, discovered the bacterium of tuberculosis, 1,000,000 of which can live in one drop of sweet milk, and so prolific that from one bacterium, deposited in the blood, may be given off in six days 120,000,000 of its kind.

A patient who is the subject of consumption will, in twenty-four hours, expectorate 200,000,000 germs,—the mind fails to grasp the magnitude of this source of human suffering.

Are we surprised that more people die of consumption than any other disease? Are we not rather surprised that this one disease alone has not depopulated the earth?

The light thrown on tuberculosis since Koch's discovery while promising much has revealed one of the darkest pictures ever held before the public eye.

While these bacteria have a special affinity for the human lung, there is no tissue in the body immune to their onslaught, and not only the human body, but they attack many of the lower animals and fowls, especially those domesticated. If 120,000,000 bacilli are propagated from one bacillus in six days, what will be the result if you solve this problem for a space of three months by arithmetical proportion?

To make the picture darker still, remember that these bacteria will live after being expectorated on the wall for from five months to as many years, under favorable conditions, which we usually have in the apartments of tubercular subjects, where after a lingering case of consumption the family is permitted to continue occupying the same rooms in which the atmosphere is teeming with this deadly germ, with no germicidal measures having been instituted.

The time has come when the people must be educated; no available means to accomplish this end should be ignored, that will teach the cause, the nature, and how to prevent, not only this, but every other preventable disease. Teach the children in school, not only from books, but by actual prophylactic methods, such as they can understand. Let each child have his individual cup, out of which to drink water. If any have the habit of expectorating let him use cuspidors, provided by the school, which shall be gathered and burned by the sexton, or have his own cuspidor which he shall be required to burn after using. Teach the girls that the time honored custom of kissing should be relegated to the past, as a sanitary and prophylactic measure. Have special chapters in their text books, teaching the nature of the most common diseases, with the most efficient means of their prevention, not neglecting to refer to the power of the flea, the fly and the mosquito, as transmitters of disease and how this power may be most effectively destroyed.

On the importance of the use of germicidal measures in cases of existing sickness, on the importance of knowing what, how and when to eat and drink. The people should also be taught that there is no specific for consumption, nor is there any climatic cure for this disease. To illustrate not only this, but the fact that this disease is infectious, I will briefly recite the experience of one of our western cities, whose citizens boasted of the virtue of its environment as a cure for consumption. They opened wide their doors to those who needed its influence. No pains or expense were spared to beautify its parks. The grass grew luxuriantly, covering the earth with a soft green carpet, after nature's most lovely design,—the sparkle of the dew drop depending from the petals of the native lilly was more beautiful than the ever changing colors of the diamond,—the aroma of flowers and song of birds, with shimmering lights, from dancing sun-beams chasing the shadows, made it a paradise for the victims of consumption who possessed the means and strength to avail themselves of its comfort. They would sit in, or promenade through these parks from early morning until the birds had folded their wings and hushed their carroling for the night. With what result? A broad cast sowing of the seeds of consumption falling on good ground, springing up and producing such an abundant harvest that at one time it was feared the entire native population would become infected by tuberculosis. This was accom-

plished by the victims expectorating on the grass and amidst the flowers, that most deadly germ, transforming those evening zephyrs which had played so gently among the curls of bright-eyed maidenhood, and the murmur of those crystal fountains which had chased away the cares of stalwart young manhood, into sad requiums of disease and death,—a result absolutely unnecessary. A slight precaution would have protected the health of those who were well and in a measure assisted in restoring health to those who were sick.

This manifest carelessness may be observed almost over the entire south. Our own city which nestles at the feet of God's special providence, whose atmosphere is balmy and whose people are genial. With them let's visit some bright morning our Electro-Calebryate well,—behold with wonder that gushing stream, perpetually flowing from the interior of the earth. It is a magnificent scene of beauty and utility, with a justly growing reputation of curing diseases. See those dippers suspended by chains from which all drink in common, the water of renewing health and vigor. From the manifestation of good cheer by the old as well as the young, it might very appropriately be called the fountain of perpetual youth,—all old and young, sick and well drinking from the same vessels, which may be loaded with the germs of consumption, syphils, diphtheria, scarlet fever, typhoid fever, measles, pneumonia, lagrippe and many other diseases, with not even the smallest poster of instructions.

Go through the schools and public buildings of our country and you will find the same manifest neglect.

While education has done much, it will never meet the demand of a thorough system of prophylaxis, and when it fails to meet a responsive cord in the heart of society, legislation with its strong arm should supplement the work, one act of which would blot small-pox from existence and the money and brain expended each year in its attempted suppression be transferred to the suppression of other diseases, the most fatal and widespread of which is tuberculosis.

The problem of the best and most efficient agency to place in operation the principles of prophylaxis was solved when Dr. Davis advocated a higher standard of medical education, and placed on foot our National Association of physicians. By advanced education we are not only enabled to appreciate the work of those going before us, but also a more universal knowledge of the great principles involved in the relief from and suppression of disease, thus giving us a solid basis on which to complete this organization, which should be encouraged by the laity, and to which every true physician at heart should belong, realizing that if he stands aloof to this great work, he is living not in so advanced an age as did Harvey and Jenner, but is co-evil with Diogenes, who when asked by Alexander the Great what he could do for him replied, "just keep out of my sunshine."

There is no body of men who know so well the needs of the people with reference to health, nor is there any other body of men who can so quickly impress the making of needed laws as can this, which is the sum of the county and State associations of the United States. We will see and feel the results when the law enforces vaccination, —isolation of those infected with contagion, —immediate and thorough disinfection, after convalescence or death,—the proper disposal of ejected excrementatious matter, —the proper care with reference to fleas, flies and mosquitoes, the distribution of literature and exhibition of posters in public places, a law forbidding a tubercular mother nursing her offspring, and forbidding the marriage of infected persons until cured,—the suppression of promiscuous expectoration on the sidewalks and in public carriers,—condemning all cuspidors, even in private homes, except those which shall be burned after being used,—that all milch cows suspected should be examined, and when found infected should be destroyed by the State—notwithstanding Koch's statement that there is little danger from infected cows' milk. Where and when necessary for investigation that laboratories shall be erected and supported by the State,—that sanitoriums shall be maintained for the treatment of tubercular subjects at public expense.

Within a few years after the institution of a regime of legislation among an educated people, consumption with many other contagious and preventable diseases will in a great measure disappear from the earth. Then will the doctor be more a guardian of public health and less a visitor of the sick. A director of health giving exercise and a teacher of sanitation and hygiene,—then will he not live in the homes of mourning, but in the sunshine of healthful humanity inhaling the aroma of flowers and listening to the glad song of nature.

If I were asked what would be the greatest blessing to humanity from our profession, I would say: Prophylaxis; and if asked the great source of prophylaxis, would say Medical organization.

Surgery of the Prostate Gland.†

By F. M. Robinson, M. D., Gynecologist to St. Vincent's Hospital, Birmingham, Ala.

The prostate gland, in size and shape somewhat resembling a large chestnut, is about 1½ to 2 inches from the anus. It lies just below the neck of the bladder, the apex resting against the superior layer of the triangular ligament; it surrounds the prostatic portion of the urethra and is in relation by its posterior surface with the anterior surface of the rectum. Between the bladder and rectum and behind the prostate are the seminal vesicles and the terminal portion of the spermatic ducts.

On account of the relations existing between the prostate gland, bladder, seminal vesicles, spermatic ducts and anterior wall of the rectum, it is at once obvious that a digital examination per rectum will be of material aid in determining the condition, size, etc., of the prostate. "It is divided into two lateral lobes by a posterior and an anterior median furrow." (Deaver). A third or middle lobe is situated back of and between the two lateral lobes, projecting toward and sometimes into the bladder. This is hardly discernible except in disease. When diseased it is often pedunculated and projects into the bladder and may be the main obstacle to micturition even when the lateral lobes are very much enlarged and appear to be the obstructing cause. The nerve supply is from the prostatic plexus and is given off from the lower part of the pelvic plexus.

One of the most frequent, irritating, and depressing misfortunes that hang over the fifth decade of a man's life is perhaps hypertrophy of the prostate gland. The symptoms are in the beginning a slight tenesmus which increases and becomes painful. The urine may continue to dribble after the act of urination has ceased, later there is difficulty in passing the urine. The patient strains and is able to pass only a few drops or a small stream, and finally is able to pass no urine at all except a constant dribble. which in itself is a symptom of a full bladder. At this stage the patient will, if not properly directed, be brought to the habitual use of the catheter, and he will have urethritis, urethrocystitis, cystitis, pyelitis and nephritis. None of these symptoms contraindicate an operation since the diseased prostate is responsible for them. For this reason the use of the catheter should not be advised, for if these septic symptoms obtained the chances of surgical relief are reduced very materially. The cystoscope is of little use in making a diagnosis from the fact it cannot be introduced. By examination per rectum a diagnosis is usually pretty easy, except where the middle lobe alone is enlarged and pedunculated, in which case the cystoscope can be introduced and aid in the diagnosis. In this paper I will not speak of the medical treatment which in the early stage of prostatic hypertrophy may relieve the symptoms and give comfort at least for a while. But when medicines fail and encouraging words can no longer stay the overflowing dribble; when the afflicted is humiliated by urinous orders and tortured by recurring or constant pain surgical relief promises a brighter day, not merely relief from pain, not merely surcease from overflow of urine, but a permanant cure is established, and not infrequently a restoration of the sexual function. The man who has done it by the perineal route a number of times can do it better than by the suprapubic, if he has never done it by that route, and vice versa. The American surgeons seem to favor the perineal, while the Europeans favor the suprapubic operation.

In performing the perineal operation a sound is passed through the urethra into the bladder—the patient in the extreme lithotomy position—a median incision is made extending up to the gland, when the urethra may be opened just in front of the gland, and through this opening a Young's retractor is introduced into the bladder, after which it is opened and the prostate drawn down into the field of vision, the capsule is split, the finger insinuated beneath the capsule and the gland peeled out either in one piece or in separate pieces; the finger may be pushed through the prostatic urethra into the bladder and by means of a probe pointed bistory the gland split in halves posteriorly and with the finger shell the gland out of its capsule. Still another method is not to open the membranous urethra at all, but split the capsule laterally and peel the gland from the capsule with the finger, avoiding injury to the ejaculatory ducts. In most cases this is comparatively easy, depending upon the amount of fibrous connection between the gland and the prostatic urethra. If these connections are very extensive the urethra had bette⁴ be opened and with a Young's retractor bring the gland into the external wound and remove it by blunt dissection.

In performing the suprapubic operation the bladder is opened by an incision in the median line, or the transverse incision may be made, a catheter having been passed into the bladder through the urethra. The middle lobe, if it is pedunculated, is removed by dividing the pedicle. The mucosa is divided over one of the lateral lobes at the

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most prominent point and with the finger peel these lobes out separately.

An assistant can, by inserting a finger into the rectum, lift the gland and neck of the bladder well up into reach of the operator, otherwise it would be hard to reach, especially in a person with a thick abdominal wall. The hemorrhage which is sometimes rather profuse can usually be controlled by pressure with gauze rung out of hot water. To prevent injury to the ejaculatory ducts Furgerson recommends opening into the inguinal region, finding and opening into the vas deferens at the internal ring, pass a fine probe through the vas deferens to the Sinus pocularis in the prostatic urethra. He uses a very fine bronze wire doubled and the doubled end is introduced into the seminal ducts.

The report of two cases operated upon—one by each route—may serve best to make plain the method followed under each operation: J. D., age 67, resident of Walker county, a Confederate veteran with a good family history except his father died of what he thought was gravel at 58 years of age and he has a younger brother who is suffering with a condition simulating prostatic enlargement at this time. This patient has had bladder trouble for many years and while attending the Jamestown reunion of Confederate veterans in May, 1907, his condition became so bad that it was almost unbearable, and upon his return in June he came to me. He was very fat and the X-ray showed nothing, but I was of the opinion that it was a stone. He was carried to St. Vincent's Hospital, given ether and an incision made into the bladder suprapubically through the median line; the bladder was next explored, no stone found, but a tumor as large as a hen's egg was found to be occupying the opening into the prostatic urethra. The mucosa was divided and with the finger the gland was peeled from around the urethra and all the lobes at once and no sign of any part of the urethra could be detected macroscopically—no microscopical examination was made—a catheter was passed into the bladder and retained in the penis by adhesive plaster. The suprapubic wound was closed, the bladder was irrigated daily with boric acid solution, the patient was placed upon a roller chair and rolled into the sun parlors of the hospital daily after the third day. He left the hospital on the eighth day; he has been comfortable since; has been able to retain his urine; has to rise not more than once at night to empty his bladder. The seminal vesicles were not injured in this case, as is verified by the fact that erections occur now, which had been a thing unknown for a year before operation.

B. W., over 70 years old was sent to me at St. Vincent's Hospital, Jan. 1907. Diagnosis, enlarged prostrate; was unable to pass water except in dribbles. Jan. 23rd he was given ether and placed in the extreme lithotomy position, a sound passed into the bladder, a perineal median incision was made extending down to the prostate, and two and one-half inches in length, the membranous urethra was opened in front of the prostate and the finger pressed into the bladder, between the lateral lobes, the gland was split posteriorly and shelled out with finger. I think most of the prostatic urethra was torn away. The sound was withdrawn and a rubber catheter was passed into the bladder through the urethra and retained by adhesive plaster. The perineal wound was packed with gauze which was removed on the second day and repacked; this was changed every day, using less gauze each dressing; after one week it was left out entirely. Urine flowed freely from this wound from the beginning, and continued to flow through a fistula in the perineum long after he had left the hospital. He left the hospital in one week, and while all the symptoms have not entirely disappeared he is comparatively comfortable, retains his urine, has to empty his bladder frequently—every 4 or 5 hours.

In this case a septic condition of the bladder was present.

Is Not the Correction of Faulty Fashions in Dress an Important Factor in the Treatment of Diseases of Women*

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"Seest thou not what a deformed thief this fashion is?"

Mr. President and fellow members of the West Side Clinical Society, when I was requested by the chairman of your programme committee to prepare a paper of more or less universal interest to the general practitioner, I was at a loss to answer him, and asked for *time*. After much thoughtful consideration I became convinced that the subject of "Tight Lacing" was of especial interest to the physician, as well as to the gynecologist, while to womankind it is of momentous importance, and my only excuse for bringing this subject before you is the absolute necessity for seriously considering the subject of tight lacing as it exists today in all civilized countries.

*Read before West Side Clinical Society, New York City, Oct. 10th, 1907.

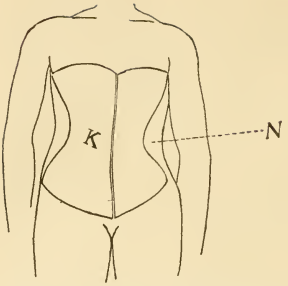

FIG. 1. K—Girl in the ordinary corset. N—Same girl without corset; norma waist line. Note comparisons.

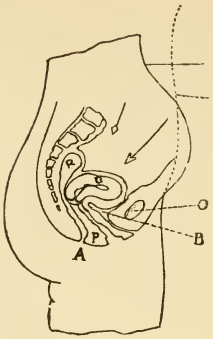

FIG. 4. C---Corset line. N---Normal outline. U--- Uterus forced dowu by corset, producing antiflexion. O---Os pubis. B---Empty bladder. R---Loaded rectum. P---Perineal body. A. Anus.

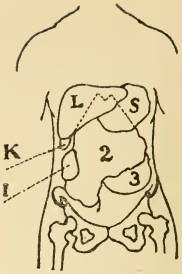

FIG. 6. K. L. S.----Kidney, liver and stomach in normal position. 1 2. 3 ----Same organs displaced by tight lacing.

FIG. 2.—Girl bending forward at work, showing how "tight lacing" increases abdominal pressure and depresses the pelvic organs.

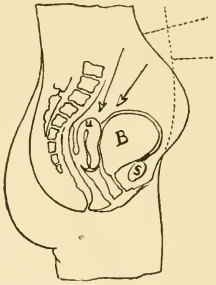

FIG. 5. C.---Corset line. N---- normal outline. B---- Distended bladder. U. ----Uterus retroverted from tight lacing. S.---Symphysis pubis.

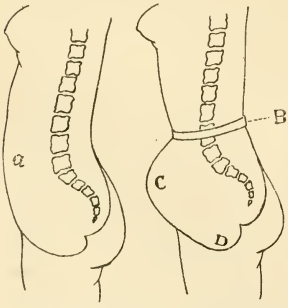

FIG. 3. A—Normal contour of the anteriorabdominal wall. B—Same patient with constricting waist band. C---Point of greatest protrusion.§ D---Pelvic floor bulged down from waist constriction (after Gallant).

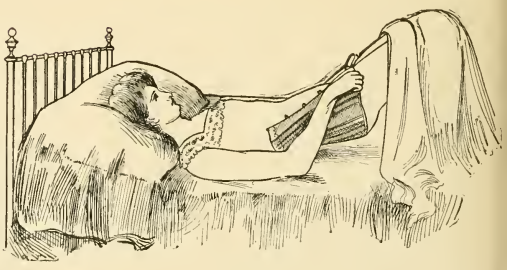

FIG. 7. The proper way of adjusting the corset (after Gallant.

Believing implicitly in the truth and earnestness of the views enunciated in this paper, the author feels no degree of trepidation in condemning *tight lacing*, and asks your thoughtful consideration of the subject as philanthropist, humanitarian and physician. I fear that in the mad rush for scientific research, we have, as physicians, overlooked the importance of this subject as an etiological factor in diseases of the female organs of generation. There is *no* one *subject* to which more importance should be given by the profession, and the author will try to faithfully point out in a practical manner the baneful effects of tight lacing, both as a factor in the etiology of disease and as an impediment to normal development of the uterine organs, which offers the greatest hindrance to disease, and at the same time to contrast the well developed conditions and freedom from pelvic disorders in those who do not practice tight lacing, with frail constitutions, barrenness with various uterine disorders—found in those who wear the corset tight. I wish it understood, in the beginning, that tight lacing is not confined only to those who wear the corset, since the clothing may be worn so tight as to do practically the same harm, though to a less degree by gradual compression.

Before discussing this subject in detail it might be well to briefly review the anatomy of the female pelvis so that you may better comprehend the idea intended to be conveyed in this paper.

The female pelvis consists of a solid unyielding structure of bones with a false pelvis representing a truncated cone, the base looking upward and slightly flattened on its anterior; the external and internal oblique, transversalis, pyramidalis and rectus muscles, with sheaths and tendons combining, form the lateral and anterior walls of a cylinder continuous with the last named structure. The spinal column lined with the quadratus lumborum muscles form the posterior wall.

Enclosed within this cylindrical bodypelvis, from diaphragm downward, are the various abdominal and pelvic organs, all readily and easily displaced by pressure. Among these we find the uterus, which remains undeveloped and in an infantile state until near the approach of puberty, when it develops rapidly and continues to increase in size, proportionately to the rest of the body, until the normal size is reached, which is usually between the sixteenth and twentieth year.

The virgin uterus is about two and one-half inches long, its width, at about the level of the fallopian tubes, nearly one and three-quarter inches, and its weight about twelve drachms. It is suspended in the pelvis by ligaments amounting to little less than folds of peritoneum. The fallopian tubes and ovaries, with feeble supports, spread out on the right and left of the uterus in connection with the broad ligaments almost at right angles.

The ovaries formed from the Wolfian bodies rapidly begin to develop at the age of twelve—when a new era sets in—maturation and periodical rupture of the Graffian follicles; just before and after menstruation the remaining parts of the organs of generation rapidly increase in size. At least eighty-five per cent. of girls develop their generative organs between the twelfth and sixteenth years. It must not be overlooked that the uterus and appendages are covered, almost entirely, by peritoneum, which is very susceptible to injury even from the slightest causes; that the construction of vessels supplying blood is of such a nature as to favor either anemia or congestion, proportionate to the degree of compression exerted. With the free mobility of the uterus and appendages and the increased supply of blood the parts are receiving, or should receive, enables us to more clearly understand the effects of pressure on an organ requiring rest and freedom during the period of development.

It is at or about this period, or more frequently earlier, that the young girl is allowed to commence wearing corsets, and she is not always given proper instructions as to the degree of constriction that should be permitted.

"Either thou art most ignorant by age or wert born a fool."

"Nature stood with stupid eyes,
And gaping mouth which testified surprise."

The law of growth in the human body is one which has not always been considered in relation to development of girls. The energies of the body rise and fall in each individual with a certain rythm. Each swell of the physical growth is designated to bring about certain morphological and functional conditions; and when these conditions are not secured at the time nature is accustomed to bring them about, or their maturation and development interferred with from faulty fashions in dress, there is a possibility of their not being completed and perfected in subsequent years. The maturity of the sexual apparatus and its function in the girl must be accomplished at that stage of development known as puberty. It is, of all periods in the life of woman, the most important, for her future health, both physical and mental, depend upon its completion and perfection. All the care and all the intelligence that it is possible for mothers and physicians to be-

stow upon her should be given at this time. Not only motherhood and subsequent health, but sanity and life-long happiness depend upon the perfect development of the female organs of generation. It does not seem unreasonable, therefore, that the foolish fashion and cursed custom of wearing tight corsets should be tabooed.

The corset offered in the shops is so constructed that when worn it exerts its greatest constriction—pressure—from an inch or so above the brim of the pelvis downward, constricting the abdominal walls, the lower part of the thorax, and pushing inward the costal cartilages, often causing the seventh and eighth ribs to overlap. The greatest point of constriction and compression is at the waist line, in the immediate neighborhood of the stomach, which when distended, as after a hearty meal, produces the "hour-glass" stomach, often observed in this class of patients.

Tight lacing forces and crowds the small intestines with accompanying mesentery and colon into the pelvis, filling Douglas' anterior cul-de-sac; if the rectum is loaded with feces and the bladder empty, antiversion of the uterus follows; if the bladder is distended and the rectum empty, retroversion results, displacing the intestines into the posterior cul-de-sac. In most of these cases, where the compression is great enough to interfere with and retard the normal peristaltic action of the intestines, constipation is also produced.

We no longer doubt that compression of any part or organ interferes with physiological growth and function; therefore, all women who wear tight corsets and constricting waist bands, breathe with a well marked sternal movement, which is unnatural since nature intended woman to breathe like man—abdominally. Women when asleep breathe like men, and all animals male and female breathe alike—abdominally. Mays has shown that (1) Indian girls breathe like men and Kellogg (2) has confirmed this observation. Among several Indian tribes, Chinese women, agricultural women, English pit-brow lassies, and civilized women who wear their clothing loose at the waist or suspended from the shoulder, all show the same type of abdominal breathing; and the flimsy argument that chest breathing is normal to women, because it is necessary during gestation, goes to the wind when it is shown that (3) that even in the last months of pregnancy abdominal respiratory movements predominate over thoracic movements. The most active respiratory organ, that muscle of respiration, the diaphragm, adapts itself most beautifully to circumstances, so that, when from tight lacing the abdomen is constricted, the type of breathing becomes thoracic, when pressure is relieved, it again changes to the abdominal type.

The Egyptians, who were foremost in the promotion of civilization, education and art, while allowing variations in luxuries, were the first to formulate legal barriers against the introduction of "any new ideas" of *fashion* in articles of dress tending to constrict the waist, or in any way to attempt to modify the true teachings of nature.

Does tight lacing and faulty dress interfere with normal abdominal respiration? The reasons for an affirmative answer are based on recent experimental researches by which certain facts seem well established that heretofore have largely been matters of speculation, opinion, or prejudice, therefore we conclude as follows:

(*a*) Normal breathing in woman is like that of man—abdominal, tight lacing changes the type to costal (4).

(*b*) The pelvic organs normally make a considerable excursion with each respiration (5), tight lacing in the ambulatory position prevents this motion almost entirely.

(*c*) Sitting or leaning forward lessens intra-abdominal pressure (6) tight lacing in these positions greatly increases intra-abdominal pressure (7).

(*d*) Tight lacing displaces the uterus downward from 2 to 3 inches (8).

(*e*) The pelvic floor is bulged downward by tight lacing from 2½ to 3 inches and the circulation rendered sluggish (9).

(*f*) Undue constriction of the waist from corsets is a constant impediment to free indoor exercises and outdoor gymnastics are hampered.

(*g*) It has been shown that a loose fitting corset diminishes chest capacity one-fifth (10) and a tight fitting corset tends to atrophy of the abdominal muscle and accumulation of fat.

(*h*) With each movement of the diaphragm, the structures of the pelvic floor with the uterus and its adnexa are carried downward from 1 to 3 inches and up again, in the case of women who have worn loose clothing about the waist (11).

Alternating pressure and relaxation accelerates the free flow of blood through the large venous plexuses and lymphatics; alternating traction and relaxation tends to develop uterine ligaments and their peritoneal investment, and gives tone to the muscular pelvic floor; alternate stretching and slackening tones up elastic supports. With each full inspiration the descent of the diaphragm increases abdominal pressure, and lessens that in the chest; blood is forced out of the portal and pelvic veins and sucked up above the diaphragm, therefore, it is plain to the critical observer that any form

of dress that cripples the free excursions of the diaphragm impedes the pelvic circulation. The blood flow of the uterine organs is seriously hindered in another way. The valveless ovarian veins empty in the area of greatest *corset* pressure which causes a daming back of a long volume of blood.

When a constricting corset is worn little or no motion can occur, because all the structures in the true pelvis are carried downward by constant pressure and crammed into the cylindrical cone-pelvis so tightly as to entirely impede movement.

Kellogg and others (12) have demonstrated that pressure from a tight corset, or from a loose corset with the wearer stooping over or bending forward, bulges the pelvic floor downward to the utmost limit of its capacity, and the uterus is correspondingly forced to descend. This constant pressure for hours keeps the uterine supports tense and stretched for many hours daily, while exertion or stooping over strains these taut structures still further.

Africans, Indians, Eskimos, and all other nations who wear loose fitting clothing are almost entirely free from pelvic disease. It is in this class of women that we find the most natural and perfect pregnancy; the easiest and almost painless deliveries and the most rapid and perfectly satisfactory puerperium. Any physician who has practiced medicine in the rural districts for the well developed and healthy country woman, and later in the city for the dainty, delicate, badly nourished, poorly developed, and where tight lacing and other foolish fashions are practically universal, will soon be convinced that there is an explanation for the frequency of female ills and frailty in the latter, as compared with the freshness, vim and vigor, and fine physique of the former.

To any clear minded, thinking physician, there can be no doubt of the claim (13) that 75 per cent. of the women who habitually practice tight lacing, to any considerable extent, suffer from mal-development of the uterine organs, especially if the corset is worn at that period of life when uterine development conduces to diseased conditions, and practically renders the normal physiological functions of the organs incomplete and painful, nor will it be longer doubted by the close observer of passing events. *Uterine Displacement*—that subject about which so much has been written during the recent past, and the treatment of which has been so varied that "Falling of the Womb," so prevalent in the minds of so many women and a "hobby" for such a large number of doctors in the main, may be laid to the *corset*.

In no forms of mammalia, other than womankind of the civilized races, do we find uterine displacement or diseased conditions of the generative organs. Why is this? Tight lacing displaces the uterine organs and appendages and mal-development is the result. In antiflexion, which is often accompanied by inflammation of the utero-sacral ligaments, the downward traction on the tender ligaments is especially dangerous, moreover, the increased pressure from above flexes the uterus still farther when the bladder is empty—Dickenson (14) relates a case of a robust dressmaker who consulted him, measuring 5 inches less with corset on than over her undershirt with corset off. Her cervix and fundus met; so extensive was the bend, without other treatment than removal of the corset, the uterus assumed its normal position in three weeks. In decensus of any degree the ordinary corset should not be worn.

In retroversion the pressure is exerted on the anterior surface of the uterus, forcing the fundus backward. Indeed, whenever an over-distended bladder tilts the organ backward, abdominal pressure increases the displacement. Kellogg and others have shown by autopsy (15) that the abdominal organs are displaced by corset wearing. The liver has often been found pushed downward even to the iliac crests. One or both kidneys in 30 out of 100 cases examined were found abnormally low.

Mal-development of the uterus and appendages effects menstruation in various ways. Amenorrhœa is frequently the result of a poorly developed mucosa and its adnexa together with faulty developed ovaries —a condition which, if neglected, often leads to atrophy, or you may find congestion—menorrhagia with long continued profuse flow. Dysmenorrhœa is a condition mainly due to mal-development of both uterus and appendages, the nervous system, and also to the imperfect development of the muscular and cellular tissue entering into their make-up, rendering them inadequate to their physiological requirements.

Physiologists tell us that there are in the uterus, embryonic cells which remain throughout life; they are the cause of epithelioma of the cervix, and the cervix in 98 per cent. of cases is the seat of uterine cancer, local irritation and ulceration being the exciting cause. Tight lacing by producing mal-position forces the os downward against the floor of the vagina, causing inflammation, irritation, and eventually ulceration. A prominent author says (16) "Up to puberty the mortality for carcinoma is the same, afterward the relative proportion of female to male deaths gradually rises till it attains its maximum at about the sixtieth year. Cancer of the uterus is a rare disease

among Indian women, yet occurring with great frequency in all civilized countries, must have its explanation in some custom peculiar to such civilization.

Miscarriages, lacerated cervix, weak and inefficient contractions of the uterus in labor, protracted puerperium, the result of subinvolution, may often find their true explanation to be due, directly or indirectly, to mal-development. The increased frequency of endometritis, hyperplasia, erosion, stenosis, sterility and atresia of the cervix and os, must be largely due to this cause—a large number of the para-uterine cysts, as well as papillomatous cysts of the hilum, par-ovarian cysts of the broad ligaments, have their origin in these unobliterated ducts and the remains of the Wolfian bodies. Mal-development is surely accountable for this condition of affairs. Fibroid and other tumors of the uterus have their etiology in mal-development of the organs of generation (17).

During the past few decades the Germans, who have always been early and earnest workers in new fields, have been busy inventing new bandages, supports and corsets for displaced organs. Israel, of Berlin(18) in a comparatively recent monograph describes a waist that acts by not interfering with the normal motions of the body, nor having any pads for making direct pressure over any of the abdominal organs, or the organs of generation. It is an apparatus with triangular air cushions made to fit over Pouparts ligament and the iliac crests, and is held in place by elastic bandages reinforced by braces and stays.

A few years ago, Gallant, of New York, published (19) some original ideas on a new straight front corset as an ideal orthopedic kidney support. He believes that the weight of the clothing and compression at the waist line at and after puberty have an important effect on girls in producing movable kidney (20). He recalls fifty cases where he made careful measurements and found abnormalities in the length of the trunk, as shown by the distance between the suprasternal notch and upper border of the symphysis pubis, and the deviation from the normal relation between the circumference of the waist and hips at the trochanters. There was a hollowing of the epigastrium and bulging of the hypogastrium. A respiratory rise and fall of the greater curvature of the stomach was observed in thin-walled subjects.

Displacements occurred frequently after child-birth, which could have been remedied by a firm abdominal binder and exercise while in bed. Prolapsus of the colon and stomach were generally associated with that of the kidney. These conditions were not remedied by operation. According to Gallant, a properly shaped corset, put on before rising, in a semi-opisthotonos position, makes the patient comfortable and prevents complications.

It remained, however, for Heath, of New York City, working along independent lines, to perfect the straight front corset—a specially designed abdominal corset that meets the demand of physicians for one that will successfully support displaced organs. The Heath corset is built on specially designed lines, altogether different from all other corsets, and when perfectly (made to measure) fitted, lowers the waist line in front, gives perfect freedom of movement to the entire chest cavity, promotes deep breathing, and at the same time gives direct pressure and support from below upwards and backwards throughout the lower abdominal region, which not only reduces a large abdomen, but holds in place all prolapsed viscera.

With this corset, there is absolutely no constriction at the waist line, nor above; all the compression is across the hips and lower abdomen, which is lifted upward and backward, leaving the chest free, allowing deep breathing, permitting chest expansion, and favoring an erect carriage. The corset is made with a long, graceful, straight front, which entirely covers the abdomen to the os-pubis, at the same time adding support to the diaphragm, instead of breaking it down as do other corsets. The waist line of this corset runs below the short ribs, which lengthens the waist producing graceful lines without compression, encouraging deep respiratory movements with the effect of enlarging the bust measure and throwing the chest forward. The average reduction of the abdomen from the first wearing is from 3 to 5 inches and from 6 to 10 inches after the first month.

Rigidity instead of flexibility have marked every corset heretofore manufactured. This corset combines flexibility with elasticity, which permits it to yield to every movement of the body, leaving the organs of breathing, the stomach, the liver and kidneys, the uterus, and appendages in their normal and natural position of unrestricted freedom. No woman ever thinks of loosening this corset, or feels the need, when it is removed, of taking a deep breath. On the other hand, all women who practice tight lacing with the ordinary corset from the shops, complain of pain on removing their corsets. Why is this? Because the pain is caused from the organs attempting to assume their normal position. This is the only surgical corset manufactured (12) which reduces a large abdomen, and holds in place all prolapsed viscera, and combines

all the style and elegance of figure of the ultra-fashionable. As a surgical corset it is indicated in "floating kidney," enteroptosis, gastroptosis, dilation of the stomach, and for supporting the abdomen after laporotomy and parturition.

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Disease of the Antrum.

By B. D. Sibley, M. D., Birmingham, Alabama.

Those animals which depend on their sense of smell to aid in obtaining their food have a very highly developed olfactory system. We find the nose and accessory sinuses comparatively larger. The sinuses subdivided and the turbinates more numerous to afford more surface for the distribution of the olfactory nerves. In these animals the branches of the olfactory nerves are distributed throughout the accessory cavities.

But in man, who is endowed with higher faculties and not dependent upon his sense of smell for finding food, this system of labyrinths has degenerated into comparatively simple structures, and the turbinates have been reduced from five to two in number. The accessory sinuses in man no longer contain normally any subdivisions; but rudiments, as well as complete septa, are occasionally found in some of them.

The sinuses themselves are almost completely shut off from the nose by the contraction of their ostia; their olfactory function is lost, and they now serve as respiratory cavities only. The principal function of the nose is to warm and moisten the inspired air, the performance of which necessitates special anatomical arrangements. This is provided for by the turbinates and accessory sinuses. In order that the air may be properly moistened and heated, the rapid influx must be arrested somewhat in its progress. The entrance into the nose is small, but the nasal cavity itself is large. On the outer wall of the main cavity are found several small openings, which communicate with other cavities; the accessory sinuses respectively; the antrum of Highmore, ethmoid cells, sphenoidal sinus, and the frontal sinus.

To further arrest the inspired air, jutting from the outer wall into each nasal cavity we find two shelves or turbinates, freely covered with blood vessels, and mucous membrane, which is continuous with that of the accessory sinuses, all arranged so as to impede the air.

Posteriorly marking the exit from the nasal cavity is found a small opening; hence each nasal cavity is really a reservoir with a small opening at each end for the entrance and exit of air, and might be compared to a lake where the air is constantly flowing pure and free and yet retarded long enough normally to be warmed and moistened during its course through the nose. This arrangement prepares the air for the lower respiratory tract, and any departure from the normal arrangement, such as catarrhal congestion, with swollen mucous membrane, or hypertrophy, traumatism, etc., can cause a blocking of these openings and thus, by retention of secretion containing bacteria, act as excellent incubators for purulent inflammatory products, with its resultant effect on the tissues. I shall devote my paper to the discussion of disease of the antrum. Suppuration of the accessory sinuses impresses me as being one of the leading subjects the rhinologist has to deal with. It is foremost in the minds of our best thinkers, and much good is being accomplished. Understand me at the beginning that I do not claim anything original in this paper, but merely wish to state to you the points of interest that impress me as being valuable after considerable research, many operations on the cadaver, the study of over one hundred sections, and what experience has taught me with the cases I have had during my practice in this special line of work,

No attempt will not be made to describe the nasal cavities in detail; but it is quite necessary to refer to the principal points. I shall refer only to the outer wall of each cavity, as it is the only one on which we find our points of interest, and forms the inner wall of the cavity which we shall discuss.

Each outer wall is traversed by two shelves or winglike bodies, known as turbinates, which project into the nasal cavities, and divide each nostril into three compartments or meatuses.

The inferior meatus is the space between the floor of the nose and the inferior turbinate. The middle meatus is the space between the two turbinates. The superior meatus is all the space above the middle turbinate. There are two points of interest on the outer wall or the inferior meatus: first, the opening of the lacrimo-nasal duct, found one-half inch behind the anterior tip of the inferior turbinate, just beneath the junction of the turbinate with the outer wall. The second point of interest is just back of this lacrimo-nasal opening, where the wall is very thin, and is the point where a puncture should be made for diagnostic and drainage purposes.

The points on the outer wall of the middle meatus are as follows: Here we find a crescentic groove, which leads from an opening in the floor of the frontal sinus, passes downward and backward on the outer wall of the middle meatus, under cover of the anterior part of the middle turbinate, and terminates at the opening of the Antrum of Highmore. This groove is known as the hiatus semilunaris. Situated along the course of this groove, and forming the upper and posterior border of the hiatus, we find the anterior ethmoid celis. This groove is a definite and constant landmark to be recognized and located in all sinus operations. In order to locate the groove an anterior end of the middle turbinate must be removed.

It is to be deplored, the confusion of terms which are used by anatomists in describing the nose. All that is necessary to be remembered, however, is that in every instance there is present in the middle meatus a groove extending as described above, and which receives drainage that may come from either the frontal sinus, anterior ethmoid cells, or antrum of Highmore.

You can readily see from the close connection along this groove how easy it is for one sinus to transmit infection to another. They are often simultaneously involved, but are also involved separately. My paper, so far, may appear to you as a rehearsal of the anatomy of the nose; but as I stated at the beginning, a thorough knowledge of the surgical anatomy is absolutely necessary in order to treat intelligently disease of the antrum; as in every case of antrum infection there is great liability for surgical demands.

Etiology.—Any of the acute infectious diseases consequent on coryza such as measles, influenza, or repeated acute colds; traumatisum, by conveying pyogenic matter to the antrum or obstruction to the exit of secretions by hypertrophy, polyps, malignant growths, or adenoids, may give rise to purulent inflammation of the antrum. After the cavity is infected the mucous membrane undergoes the changes that mucous membranes are subject to in closed cavities; first swollen and congested, hypersecretion, then hypertrophy and polyps are liable to form. The retained secretion laden with bacteria keeps the cavity renewed with inflammatory products; and when the cavity becomes closed you often have an offensive caseous formation; and sometimes the cavity swells and may rupture in any direction, either into the orbit, nose, or by extension through the ethmoid cells may rupture into the cranial cavity. Hence you can see the necessity of early recognizing the condition, and as soon as possible relieve the retained pus. Not all cases, however, are occluded; and we may have the antrum, as it were, filled and overflowing. The symptoms are frequently associated with coryza. The patient often complains that he has catarrh, and takes cold frequently, having to clear rhinopharynx frequently, and soils many handkerchiefs during the day. He has headaches, neuralgia, pain over the region of the cavity, and tenderness on pressure; or may have swelling over the cavity. Examination of the nose will show the mucous membrane red and injected. The anterior end of the middle turbinate is usually swollen and polypoid; pus is seen beneath the middle turbinate, or may find polyps from one to many, and varying in size, hanging from the middle turbinate or beneath the turbinate along the hiatus. Sometimes the posterior end of the inferior turbinate is very much hypertrophied, blocking the choana on the affected side, due to constant irritation from pus trickling backward over the turbinate. Often the sense of smell is impaired, and the patient has a very offensive ozena.

The treatment of a diseased antrum depends upon whether seen in the acute or chronic stage. If seen in the acute stage often merely shrinking the swollen mucous membrane, which surrounds the opening in the hiatus semilunaris, frequently, with cocaine and adrenalin, so that the antrum can empty itself and keep the nose clean, is

all that is necessary. I always apply the cocaine and adrenalin myself, on a cotton swab. Cocaine, four per cent. solution, is applied to the region of the middle turbinate, and then a flat spatula pointed probe is used to elevate the middle turbinate, and at the same time scrape such granulations from beneath the turbinate as have formed there. Then pass a small saturated swab of cotton beneath the turbinate as far as you can, so as to shrink the tissues there. Then clean the nose, keep the patient in bed, give a hot foot bath, Dovers powders and calomel at night, and look after his general condition.

If seen in the chronic stage, first try to establish free nasal respiration by removing any obstruction, such as hypertrophy, polyps, or spurs, and then try to locate the source of pus. After cleansing the nose, remove the anterior end of the middle turbinate, swab the hiatus, leaving a small plug of cotton in the upper part. Make the patient bend forward, his abdomen on a stool and the top of his head resting on the floor, with his face tilted to the opposite side for a few minutes. Then make him blow forcibly through the suspected nostril, and often pus will be found oozing from the lower end of the hiatus, especially if the pus is liquid. Then I suspect the antrum, as its normal opening is found there. Again, if the lower end of the hiatus is plugged and pus continues from above, we infer that it is either from the frontal sinus or anterior ethmoid cells.

I use trans-illumination in every case of suspected disease of either the antrum or frontal sinus. It has never proved of much service in frontal sinus cases, but it has been the means of making a positive diagnosis in several antrum cases for me, in which the picture was very clearly defined. Pain elicited on pressure over the antrum is of course a great aid; but if still in doubt as to the source of infection, I proceed to pass a Myles trocar up beneath and one inch behind the anterior end of the inferior turbinate and puncture the antrum. If pus be present it will be found oozing from the external end of the trocar when the canula is removed. This makes the diagnosis positive. When pus is found in the antrum, irrigate the cavity through the canula with normal salt or 1-15,000 bichloride solution. The solution makes its exit through the normal opening above the inferior turbinate. If after a reasonable time the patient does not seem to improve, I insist upon doing the radical operation.

Unless the antrum is diseased from a tooth, I would never advise opening through the alveolar process, which is so often done by dentists; and if the trans-illumination shows a marked difference in the shade of light, I should not advise that route; for it has been conclusively proven that pus itself does not interfere with the trans-illumination, but that the shadow is produced by the thickened and polypoid mucous membrane; and treatment by irrigation is too slow as well as uncertain, for no one can tell the positive change which has taken place in the mucous membrane of the antrum until he has explored the cavity and investigated its contents. Another objection to the alveolar route is in the fact that the thickness of the alveolar process varies greatly.

The antrum develops or buds out from the region of the normal opening which is situated at the upper and posterior angle of the inner wall, and spreads from this point downward, outward and forward. When there is lack of development it is usually in the downward direction. This explains why the floor of the antrum is sometimes found to be very thick. There is little or no development upward, on account of the orbit, and so the normal opening is situated near the roof. Another very important point which was demonstrated to me by Dr. Beman Douglas, while studying many sections, is the fact that while the antrum may fail to develop downward, in every instance it reached outward beyond the malar ridge; and hence he makes his entrance ⅛ inch internal to the malar ridge on the anterior surface of the malar process of the superior maxillary bone. The wall is thin here, and the antrum is entered with ease.

The day before the operation I remove the anterior end of the inferior turbinate on the affected side. This shortens the time and lessens the bleeding during the operation. General anaesthesia is used. Place the patient on his back, with head lowered. This avoids the necessity of plugging the posterior nares, as is usually done to keep the blood out of the larynx, which procedure, as well as plugging between the teeth, interferes with the anaesthetist, who at best has a very hard time during operations upon the mouth or nose. The teeth are carefully cleaned, the lips are retracted by an assistant, and an incision is made along the gingivo-labial line, through the mucous membrane, muscles and periosteum, extending from the incisor to the first molar tooth. The periosteum is retracted, and anterior surface of the malar process is brought clearly into view. The antrum is opened through the anterior surface of the malar process, and enlarged downward to the level with the floor over the alveolar process and internal to the nasal wall and upward to within ⅛ inch of the infra-orbital nerve. This opening affords a good view

of the cavity. The contents of the cavity are carefully removed with a curette, paying particular attention to the angles of the antrum, especially the region of the inner wall near the normal opening. Saturate a piece of gauze with peroxide of hydrogen, and pack into the antrum for a few seconds; and when removed the cavity will be practically free from bleeding. You can then insert a small electric light into the cavity and see that it has been thoroughly cleaned. Notice the inner wall, and you will see a prominence which can also be felt by a finger inserted through the opening. The nasal duct extends from this point upward and forward to the upper and inner angle of the antrum. The lower end of the duct begins as stated before, just beneath the inferior turbinate which crosses the wall about its middle horizontally.

Insert a handle of a scalpel or some similar instrument into the nose, to prevent the chizzel from injuring the septum. A counter opening is made into the nose. Some surgeons enlarge the normal opening above the inferior turbinate, but I prefer the Caldwel Luc method, which is to make the counter opening beneath the inferior turbinate, as there is less danger of puncturing the orbit, and you have the advantage of a lower point for drainage. Make this opening large enough to insert a finger, and then smooth all spiculæ of bone down to the level of the floor of the nose. Again clean the cavity, dust with iodoform, and pack the antrum in such a way with a single strip of gauze that the last end may be passed through the counter opening and extend out of the nose. Should you use more than one strip of gauze, remember how many are used, so that all will be removed when re-dressing the wound. The original opening in the mouth is closed with catgut sutures. Leave the gauze in the antrum for four or five days. After this the cavity is treated through the counter opening in the nose by irrigations.

In conclusion, I think that conservative methods should always be given a trial before recourse is had to the radical one. Drainage is best secured through the nose. The establishment of free nasal respiration is an important factor in securing permanent results.

Penetrated Gun Shot Wound of the Chest.*

By Remy G. Ducote, M. D., Bordelonville, La.

A penetrated gun shot wound of the thorax is one that opens into the pleural cavity or mediastinum. Gun shot wounds have always been regarded dangerous, owing to the extent of the injury and complications, tetanus, septicæmia, and blood poison.

John Davis received a gun shot wound fired by a negro, in a camp, at a distance of about twelve feet, taking effect in the chest, making a complicated gun shot wound, as fragments of ribs, shots, waddings, powder and thick woolen clothing were carried with the shots into the cavity.

Many shots were deflected from their course owing to the side way standing position of John Davis, and also the resistance of the ribs.

The shots took effect in the right side, partially injuring the mammary, epigastric and the right hypo-chondriac regions of his body.

A large gaping, lacerated wound, disclosing torn tissues and muscles, ribs fractured, pleura and lung tissue injured. Into the space made by the removal of the fragments of ribs, the pyloric end of the stomach protruded, but intact from injury.

The operation was deferred until next day about 1 o'clock, p. m., with Dr. John Bayer in consultation. We anaesthetized him, enlarged the entrance of the wound, removed torn tissues, fragments of bone, shots, clothing and foreign bodies, arrested bleeding points, irrigated well with bichloride and carbolic solutions and packed the opened wound with iodoform gauze.

Regardless of the aseptic measures taken, two weeks after, in the course of convalescency, he developed empyema, causing his temperature to rise from 103 to 104 every evening for nearly two weeks, producing a great bulging of the ribs and excruciating pain caused by the pressure of the pus growing tumor.

The tumor finally ruptured through the ribless space and gradually the immense swelling disappeared and with the continuous daily irrigations of carbolic solutions the man made an uneventful recovery.

*Read at Marksville, La., before the Avoygellies Parish Medical Society.

Uncinariasis; or the Hook-worm Disease.*

By Dr. T. J. Pruett, Huntsboro, Alabama.

I crave the indulgence of your honorable body in essaying to speak to you upon a subject so trite and common-place as worms, no matter of what species or character. However, I shall promise not to say anything about the Oscaris Lumbricoides, that long round fellow, nor the Oxyuris Vermicularis, the little one—no larger than a piece of thread or a pin; neither shall I be so presumptious as to attempt to tell you anything about the interesting family of

*Read before Russell County Medical Society.

Teniae—or tape worms.

I shall simply call your attention, in as brief a manner as possible, to a disease or condition caused by another little parasitic inhabitant of the intestinal canal, which, though not altogether a new worm, has not until within recent years, received a great deal of attention or study. I refer to the Hook worm, or to be more scientific the Uncinaria Duodenale—or better still, Uncinaria Americana, a name very properly given to it by an eminent American Zoologist, Dr. Charles Wardell Stiles, who is at present connected with the Public Health and Marine Hospital Service of the United States.

It is not my purpose to go into a technical and scientific description of the life history of this interesting little parasite; and I do not wish you to think me impractical in choosing a subject which to a certain extent may seem to be a rare disease, which, however, in my opinion is not the case. My main object in taking this subject for discussion is to endeavor to call your attention to the relation existing between this disease and many cases of that often ill-understood condition, which, as the saying goes, is "as old as the hills." I mean anemia. Hence if we are able to explain the cause of even one obscure case of persistent anemia, and by the suggestion of the proper remedies "bring back the bloom of youth" to at least one puffed, pale and bloated face, we trust that we may not be considered impractical.

If you will pardon a personal allusion, I will state that I first became interested in the study of this disease during my residence in the tropics, where it is quite prevalent. Living in a locality noted for malaria, and having had to deal with so many cases of anemia, which I was accustomed to attribute to malaria,—no doubt very properly in some instances,—I was eager to pick up anything bearing on the subject. Some two or three years ago, there appeared a paper in American Medicine under the title: "A Study of Uncinariasis in Porto Rico," by Drs. Bailey K. Ashford, Surgeon in the U. S. Army, and W. W. King, of the Public Health and Marine Hospital Service of the United States. The reading of this paper was a revelation. I began to study, so to speak, some of my malarial anemias, and easily awoke to the realization of the fact that many of these poor sufferers were the accommodating hosts of scares and scares the Uncinariae Americanae,—the little fellows which you have just seen. (These come from a patient in Huntsboro).

The disease caused by this little worm is not entirely new, yet the first description of the parasite was published by an Italian physician, Dubine, in 1843, (some writers say 1838). It was named by him Agchylostoma Duodenale, and it is now known as the old world hook worm. The Zoologist mentioned before, Dr. Stiles, tells us that he American hook worm, or Uncinaria Americana, as studied by himself and other American authors, presents some little peculiarity in its anatomical make up, somewhat different to the worm described by Dubini. At any rate, they belong to the same family, the one being probably a subdivision. As there is no need for this technical description, it is sufficient to say that Uncinariasis, or Anchylostomiasis as called by older writers, is caused by the hook worm. The worm is so named on account of the anatomical arrangement of its mouth. The mouth is provided with a number of papillae resembling hooks, hence the name. They are about ½ inch in length, the female being slightly larger than the male. The worms live in the small intestine, generally in the duodenum or jefunum. They fasten themselves to the intestinal mucosa and extract blood from the host, producing, no doubt, minute hemorrhages. In all probability also they produce a substance or toxin which acts as a poison, the absorption of which would account for many of the symptoms. Some writers, notably the surgeons just mentioned, who studied the disease in Porto Rico, claim that this latter, the toxin theory, is the correct one. The injury to the intestinal wall caused by the bites is undoubtedly a factor in causing many symptoms of the disease. The wound forms an excellent point of attack for bacteria. And these numerous bites cause the wall to be thickened, thereby causing it to lose, to a greater or lesser degree, the ability to perform its proper function. This explains the intestinal disturbances which nearly always accompany the disease. The worms enter the intestinal canal from without, and they are not developed from the egg within the canal, as would seem to be the proper thing. Infection generally takes place through the mouth, either by the hands soiled by the larvae of the worms, or by infected food. Infection may also occur through drinking water. The infecting agent is taken into the intestinal tract in the larvae stage, and not in the egg stage. We are told that for every adult hook worm in the intestines, a separate germ must enter the body. The worms produce innumerable ova in the tract, and these eggs must be expelled with the feces before they can be developed into the embryo. The egg has a very thin shell. This change from the egg to the embryo is effected by stages, the time varying with the temperature, moisture and the position in the feces, etc. Heat and moisture of the soil where deposited are

necessary for this development. After the eggs are hatched, so to speak, then begins this development in the larvae stage. Infection is easy, and may be brought about in various ways. The disease is spread by the alimentary evacuations which contain the ova. Eating with the hands soiled with mud or dirt, contaminated with the feces, or with dirt under the finger nails, are very common methods of infection. Eating food or fruit that has been exposed to the larvae is another. The drinking water may easily become contaminated by depositing the feces near the well, and especially is this a profound source of infection if the well is located in a loose sandy soil, or if the drinking water is surface water. Children fall an easy prey to the disease, also people who are in daily contact with earth, hence the disease is more common in rural districts, and sandy districts especially.

The symptoms of Uncinariasis are various. Chief among the many symptoms is anemia, with all the circulatory disturbances which accompany extreme cases. There is dizziness, palpitation, and great weakness. The patient is unable to do any laborious work, without becoming completely "out of breath" as he describes it. Oftentimes he is unjustly accused of being lazy—("The germ of laziness.") In some cases there is great emaciation; more often, however, there is dropsy, with a bloated, puffy, pale face, and a regular "fat belly." There are colicky pains in the abdomen which the uneducated patient generally describes as "a misery in the stomach." There is a perverted appetite, the most common of which is dirt eating. (Right here, gentlemen, allow me to digress enough to say that, in my opinion, fully 95 per cent. of the pale, sickly, bloated looking children, many of whom all of you have seen, and whom we have been accustomed to call dirt eaters, and have attributed their condition to the fact that they ate dirt, were, or are, victims of this disease.) There is great pallor of the skin, however, not waxy like that of kidney disease, nor the greenish yellow of malaria. The skin is generally dry and hard. The lips are pale. The skin is often wrinkled, and the patient has an old look,—like an old man or woman.

Constipation may be present, yet very often there is a diarrhoea. The stools may be brownish, or rather brownish red. There may be nausea. Edema is often present. There is frequently throbbing of the carotids, together with hemic murmurs. (Here, gentlemen, you see an all of the plain symptoms of old-fashioned anemia). Extreme cases show the effect the disease has upon the nervous system. Those affected are apt to be dull and stupid. They present a facies which can be recognized at once. They experience great difficulty in learning at school. There is always tardy development. Often there is a dull stare of the eye, and the pupil is almost always dilated. The severity of the symptoms vary with the number of the parasites present, and with the length of time that the patient has been affected. The injury which the patient suffers, is the result of several factors. The sucking of the blood by the parasites is, of course, a constant and steady drain upon the system, and the loss of blood into the intestines through the small wounds caused by the worm is another great source of depletion. This fact explains the dark, reddish brown stool commonly present. As before stated, the open places of the bites are good points for the attack of bacteria, thereby rendering bacterial and toxic infection all the more possible. Naturally the wall of the intestinal canal becomes thickened and in a state of degeneration as a result of these numerous wounds, and its function is undoubtedly very much impaired. And lastly, to repeat, the parasites in all probability produce a toxic substance which acts upon the patient. This "toxin is dissolved into the blood, and exercises its destructive action directly upon the hemoglobin." However, aside from this toxin theory, to sum up, we may say that anemia, which is, by far, the most prominent symptom of the disease, is due to two main facts: First, direct abstraction of blood by the parasites, and second, the digestive disturbances caused by the chronic retrograde tissue changes in the intestinal mucous membrane that result from the wounds produced.

The disease may be readily diagnosed by a microscopical examination of the feces. If the feces is fresh, not over 24 hours old, the eggs may be easily recognized, in various stages of segmentation. If the feces is older, the embryo may be found. In case the microscopical examination is not possible, the blotting paper test may be used. This consists in taking a small portion of the feces, say an ounce, and placing it upon a piece of white blotting paper, and allowing it to remain from 30 to 60 minutes. Remove the feces, and examine the stain. In about four out of five cases of medium or severe Uncinariasis the stain is reddish brown and resembles a blood stain.

The treatment of Uncinariasis is a simple matter. It has for its object the expulsion of the parasite, and afterward the building up of the patient. As yet, only one drug has been of much benefit for the expulsion of the worm. That drug is Thymol. However, male fern has been recommended.

The Thymol treatment is as follows: For two or three days the patient is put upon a light diet, say of milk and soup. The Thymol should be given in 30 grain doses two hours apart, until two doses are taken, say at 8 a. m. and 10 a. m. At 12 o'clock give castor oil, or a large dose of salts. For children, a proportionate dose of the Thymol should be given, but in the same manner. This remedy should be given at intervals of a week or ten days, until the worms disappear from the stools. In cases of severe infection, this may require some time. After the expulsion of the worms the system should be built up with tonics. Almost any form of iron is well borne, together with stimulants. The common sulphate of iron, 15 to 20 grains in 24 hours, is highly recommended. I have obtained excellent results from an administration of Gude's Pepto-Mangan, given in a good sherry wine. It is often exceedingly remarkable how these patients respond to iron after they are rid of these troublesome little pests.

As this is undoubtedly an infectious disease, much may be expected of some form of preventive treatment. The proper construction of water closets and the correct disposition of the fecal discharges are the key notes in methods of prevention. In country places we all know that frequently there is no privy at all on the premises; and all members of the household are promiscuously allowed to answer the call of nature, as the slang phrase goes, "in any old place," oftentimes within a few feet of the door. Children play around the yard in the sand, get the dirt containing the larvae under the finger nails, and not being acquainted with the luxury of a nail brush, and eating with soiled fingers, may easily become infected. Hence, much may be accomplished in the way of prevention by insisting on the correct location of water closets, thereby rendering possible the proper disposal of the fecal matter which is the original source of infection.

"SCAR TISSUE."

By J. R. C.

There is one legitimate reason for the contribution of a paper, to be read before a socity of physicians, or published in a medical journal.

That reason is the desire to help physicians in their professional work.

This is a laudable and praiseworthy desire, even when the matter presented falls short of accomplishing the object.

But tere are other motives where the medical character of the paper is a mere blind to mask the real object. Of this class is the paper, published in the Charlotte Medical Journal for October, headed "Scar Tissue."

Any intelligent physician can see at glance that the writer has devoted no thought to the strictly scientific or medical part of the article. There is not a thought or a fact in it that is not either common-place or distorted. No physician of average intelligence would think of presenting this paper, to his fellow physicians as a real, earnest and dignified discussion of the evils of "Scar Tissue." The only reference, of any apparent weight, is as to Dr. Eemmett's assertion of the evils resulting from cicotricial tissue in old lacerations of the cervix. Of course when the writer applies this to the results of modern Aseptic Surgery, he distorts the Doctor's meaning.

Dr. Emmett was speaking of the mass of cicatricial tissue which results from the long continued irritation of an uncared for wound and not of the clean cut, made under aseptic conditions by the modern sergeons knife.

But this, like every other expression on the subject of the paper, shows that the writer was intent upon other and entirely different things, "Scar Tissue" is merely the "John Doe vs. Richard Roe" of the old time legal proceeding and is used simply and solely to get te offender—in this case "the mechanical operator with more zeal than wisdom"—into court.

Articles of this kind are discreditable and harmful. Discreditable, in that they show the envy and jealousy of the writer. Harmful, because the direct effect is to give the general practitioner an excuse for advising against consulting a surgeon until, it may be that his patient loses his chance for recovery. We all know that the mass of the laity and many general practitioners have a horror of operative surgery—a horror rooted in the days of brutal surgery, when there was on asepsis, on anesthesia. That day is over and the skillful surgeon, with his perfected technique, is every day, not only removing the known cause of disease but exploring the cavities of the body and discovering the cause which cannot, otherwise, be diagnosed.

It is true that a man can no longer hope to be a general practitioner, an obste-

trician and a surgeon and excel in all, for nowhere is Owen Merideth's lines more applicable than to the modern physician or surgeon.

"The man who seeks one thing in life and but one,
"May hope to achieve it before life be done
"But he who seeks all things, wherever he goes
"Onlyre aps from the hopes which around him he sows,
"A harvest of barren regrets."

I have seen the modern surgeon at pretty short range. I know somewhat of the feeling which rages behind the quiet, smiling face when he is confronted with a patient whose vital forces are about to succumb to the assaults of a neglected but insidious foe. It is easy for im to trace the disease back along its course, to a time when an operation would have been easy—a cure almost certain. But now, with heart, kidneys digestive organs and nervous system all beginning to break under the strain, the very best he can offer is a chance—the only chance for life.

If the general practitioner, with an eye single to the good of his patients, would use every means to make an accurate and early diagnosis and then advise him, accordingly --more lives would be saved even at the cost of a few scars.

An eminent surgeon disussing the teachings culled from 750 abdominal sections sum them up in the October International Journal of Surgery, in this way:

1st. In all cases of tubal pregnancy, appendicitis and cancer operate just as soon as the disease is suspected.

2nd. In ovarian cyst, operate as soon as the cyst can be felt.

I feel sure that of the surgeon were to wait for a positive diagnosis, in many instances, he would need to do a post mortem rather than a surgical operation.

It so happens that I know nothing at all about the author of "Scar Tissue," except from his writings, therefore all that I have said has been decided from the article itself and is not colored by any personal feelinf.

That I am living and writing this paper I owe solely to the "zeal and wisdom" of one of those "mechanical operators" of whom he speaks, and but for an exploratory incision advocated and performed by him, I would be numbered among the things that were.

The Prevention of Valvular Disease.—Caton, Brit. Med. Jour., says that in acute rheumatism and most of the pathological states in which valvulitis occurs we can secure a large measure of rest and of the conditions favorable to heart repair if we take sufficient trouble. We lessen pain and fever by appropriate measures; we insist upon the most absolute quiet and rest, alike of body and mind; a light diet is given and, if necessary, some sedative. Sodium or potassium iodide is given. Small blisters are applied over the distribution of the first four dorsal nerves between the clavicle and the nipple. The effect of the first group of measures is to slow the hert and diminish its amount of work, offering it the opportunity of self-curative activity of the part. Of these two measures of treatment, the prolonged period of rest is by far the most important. The rest should continue for six or eight weeks or more . By degrees the bruit lessens, becomes intermittent, and at length vanishes. He has witnessed the workingman whose incipient heart lesion has been treated, thus fulfilling year after year his full measure of hard work without dyspnea and without discomfort. The rest treatment must be commenced fairly before too great an amount of structureal change has taken place.

"The pages of history," says the Medical Journal, "are filled with examples of the devoted lives of childless men and women who have worked unselfishly for the good of their kind. Bachelors and virgins have been the saints of the world, and the childless are the philanthropists, the founders of colleges, hospitals, art collections, and libraries, the philosophers, the great writers, leaders, and thinkers of the race. Plato, Joan of Arc, Savonarola, George Washington, David Hume, Locke, Spinoza, Thomas Carlyle, Florence Nightingale, Ruskin and Herbert Spencer are only a few of the great names in this class. An interesting volume could be written on the indebtedness of the world to childless men and women. The pattern of civic virtue with twelve unkempt children and a jaded, careworn wife has been held up for our admiration long enough. Without decrying matrimony we may now speak a good word for the respectable celibate."

Charlotte Medical Journal

EDWARD C. REGISTER, M. D., Editor.

No. 36 South Tryon Street, - - - -

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THE JOURNAL IN NEW QUARTERS.

Since our last issue, the Journal has removed to new and up-to-date quarters in our splendid new building on South Church street. It is always a pleasure and in many ways good to shake off the accumulated dust of the old and to begin all over again amid clean, new surrounding. However, a change is not without its difficulties for it requires time to get things again in smooth running order. And therefore we beg our subscribers and advertisers to have patience with us if this issue is found to contain unavoidable errors. We believe the Journal is now better prepared than ever before to give its readers the very best productions of Southern medical writers.

DR. J. L. BEAM.

Dr. J. L. Beam, of Crouse, N C., died Oct. 25, at Lincoln Hospital, Lincolnton, N. C., after an illness of several weeks. Dr. Beam was 39 years old and was a man of fine character and winning personality. He was graduated from the Baltimore Medical College in 1904, and was a member of the Lincoln county and North Carolina State Medical Societies.

DR. PETTEY'S EASTERN RETREAT.

Dr. Geo. E. Pettey, of Memphis, Tenn., has associated himself with Dr. Wm. F. Ridgway, of Atlantic City, N. J., and they have opened a retreat at 3303 Pacific Ave., Atlantic City, for the treatment of Alcohol and Drug Addictions by the methods introduced to the profession by Dr. Petty. In announcing the opening of this eastern branch of his work Dr. Pettey says that some years ago he had drug habitues in his own clientele for whom he was unable to secure relief by any of the methods of treatment then in vogue. This led him to undertake a thorough study of the Narcotic Drug Addictions. Two years spent in that work, he says, enabled him to form definite conclusions as to the pathology of these addictions. With that knowledge to guide him a rational course of treatment was devised, every detail of which was published to the profession. See Therapeutic Gazette, Oct. 1901, and subsequent articles.

He says it was his hope that reputable institutions engaged in the treatment of this unfortunate class of sufferers would avail themselves of the benefits of his study of this subject, but thus far few of them have done so. The majority seem to be still "Wedded to their Idol," the gradual reduction method. In Dr. Pettey's judgment that method of treatment does not give this class of patients the relief to which they are entitled. Since others do not seem to be inclined to acknowledge the advantages of Dr. Pettey's method and to give their patients the benefits of it, he is undertaking to meet the demand for such a treatment in the eastern States by opening the Atlantic City Retreat.

Dr. Wm. F. Ridgway, who has assumed the Medical Directorship of the new institution, is a graduate of Jefferson Medical College and holds positions of honor in the profession of his city. This, with Dr. Pettey's well established reputation, is a sufficient guarantee that the new institution will be conducted according to the most scientific principles and upon the highest ethical lines.

Those wishing further information should address The Dr. Pettey Retreat, 3303 Pacific Ave., Atlantic City, N. J., or Dr. Geo. E. Pettey, Memphis, Tenn.

EFFECTS OF EXPERIMENTAL INJURIES OF THE PANCREAS.

In the Journal of Medical Research (July, 1907) we find an article by Dr. I. Levin in which he reports the results of experimental injuries of the pancreas. The animals employed for the purpose were dogs and cats, and the experiments were divided into four groups. In the first group the pancreas was doubly ligated and severed at its middle. The animals recovered and subsequent autopsies showed no change in the condition of the gland, with the exception of the segments in the immediate vicinity of the ligatures. In the second series a portion of the gland was crushed with an artery forceps and the bleeding vessels ligated. There seemed to be no ill effect from it on the organism. In the third group the pancreas was either crushed or sectioned and the pancreatic blood vessels ligated. In all of these cases the gland was found diseased, but while in some cases the operation was fatal to the animal, in others the organism as a whole seemed to suffer but little. Multiple ligation of the pancreas was practiced in the fourth group of experiments. A stasis nearly complete of both secretion and circulation was produced, but was not always fatal.

The analysis of all these experiments indicates that those injuries of the pancreas produce the gravest effects on the organism which cause the most serious interference with the circulation of the organ. To produce a fatal disease it does not suffice to interfere partly with the free secretion of the pancreatic juice into the intestines or to

injure some of the parenchyma, at the same time allowing the juice to secrete into the peritoneal cavity. The interference with the circulation must be such as to produce a lesion of the whole organ so that not only will the organism be deprived of the normal function of the pancreatic cells, but also every cell will become diseased and begin to act abnormally and injuriously to the organism.

Since Balser's publication in 1882 on fat necrosis, which first indicated the close relationship between this peculiar, frequently fatal disease and acute inflammation of the pancreas, much work has been done in the effort to produce fat necrosis through some experimental injury of the pancreas. The experiments reported may be divided into two large groups. In the first group different substances were injected into the pancreatic duct or into the body of the gland. To this group of experiments belong the researches of Flexner, Opie, and more recently Hess, Eppinger, Polya, and Guleke. The best results seem to have been obtained with injections of oil and bile.

In the second group of publications the body of the pancreas was mechanically injured in different ways. Hildebrand was the first to experiment along these lines. He either doubly ligated and severed the pancreas producing a stasis of secretion, or ligated most of the blood vessels leading to and from the pancreas, producing a stasis of circulation, or cut the pancreatic duct, allowing a free exit of the pancreatic juice into the peritoneum. Williams operated in a similar way. Katz and Winkler ligated the pancreas in several places and produced both necrosis of the pancreas and fat necrosis. Very recently Doberauer reported a series of twenty-one experiments on dogs. In each case he doubly ligated and severed the pancreas with identical results, viz., the development of fat necrosis, subserous peritoneal hæmorrhages; and free hæmorrhagic fluid in the peritoneum. The animals were either dead or moribund within twenty-four hours. The author ascribes the fatal results to a combination of stasis of secretion, some abnormality in the circulation, and a lesion of the parenchyma of the pancreas.

These experiments show clearly that injuries of the pancreas produce different effects on the organism from the complete removal of the organ. After the latter operation the animal succumbs with the symptoms of subacute diabetes, while a comparatively slight injury to the organ may kill it within twenty-four hours, producing an entirely different symptom—complex. It is very difficult to form a correct idea of the etiological relation between a certain injury to the pancreas and the disease process that so rapidly kills the animal, because in all the experimental work thus far reported an injury which results fatally in a certain number of animals produces no effects on others. The experiments of Doberauer differ from all previous investigations in the fact that he obtained the same results in every experiment. It is also important to note that very frequently animals which succumb from the effects of the injury to the pancreas do not show any fat necrosis and that fat necrosis is not a necessary sequence of a severe injury of the pancreas, though this does not prove that fat necrosis, when present, may not be due to a lesion of the pancreas and to no other cause.

THE NATURE OF INFECTIVITY IN RELATION TO TUMOR GROWTH.

The Lancet (June 8, 1907), contains an address by Dr. D. A. Welsh on "The Nature of Infectivity in Relation to Tumor Growth." A disease which depends upon the proliferation and multiplication of alien cells within the animal body is termed an infective disease, and if, in addition, the disease is capable of being transmitted from one animal to another (by transference of the infective cells) it is spoken of as infectious. A disease may thus be infective—that is, due to invasion and proliferation of hostile cells—without being infectious—that is, transmissible to other animals. The ultimate unit in a cancerous growth may be taken to be the individual cancer cell, and although each cancer cell is the direct descendant of some pre-existing cell within the organism in which it grows, nevertheless the cells of a cancer become a: a very early srage differentiated and sharply marked off from all the other cells of the organism. The growth of cancer proceeds independently of, and, indeed, at variance with, the requirements of the organism and, further, the regulated and orderly growth of the parent tissue is exchonged for the unregulated and disorderly growth of the tumor. The absolnte nature and extreme degree of this two-fold independence—independence of the needs of the organism and independence of the laws of tissue growth—are the basis of that hostility so characteristic of cancerous tumors.

It is customary to divide new growths into two groups,—the simple, benign, or innocent on the one hand, and the malignant or cancerous on the other. The most benign of tumors possesses, though in lesser measure or in modified form, all the fundamental attributes and capacities with which the most malignant new growth is endowed. From a clinical standpoint it is of the utmost importance to be able to say whether

a growth is of a low order (benign) or of a high order (malignant) of malignancy: but from a scientific point of view it is no less important to recognize that the distinction does nor mark any fundamental difference between the two classes of new growth. Malignancy is only another expression for infectivity, an attribute common to all forms of new growth, but developed to a variable degree in different forms. Clinically "malignant" growths are made up of cells whose infective capacity is high; clinically "benign" growths are composed of celis of low infective capacity.

The probable origin of infective tumor cells within the animal body is indicated by certain biological considerations. In the first place we note that cancer cells are endowed with great vitality and longevity. The second point is that in their manner of growth cancer cells appear to be liberated from the conditions that regulate normal tissue development. A sudden increase of vitality among higher animal cells (of which cancer cells are but a particular variety) is naturally effected by the conjugation of two mature reproductive cells of opposite sex. In the higher animals and plants this process of cell conjugation does not take place except between cells specially set apart in the reproductive tissues and specially prepared by a succession of peculiar nuclear divisions, termed miotic divisions. These nuclear divisions are of so definite a character that they are unmistakable, and, with a few recognized exceptions, they make their appearance only in the reproductive tissues and only in the cells which are attaining maturity. Now these distinctive forms of nuclear division may be encountered in the dividing cells of early cancerous growths (Farmer, Moore, and Walker). In the unnatural growth of cancer there is the anomaly of cells descended from tissue cells but growing at variance with the conditions that regulate the development of the parent cells. The only consistent biological explanation of this independence and autonomy would be that the cells differentiated off as early cancer cells should conjugate with other cells inheriting and conforming to other conditions of growth. A truly remarkable fact in the life-history of cancer is that such a process suggestive of cell conjugation has actually been observed. At all events, an interchange of nuclear matter, which may be regarded as equivalent to conjugation, has been shown to take place between developing cancer cells and emigrated leucocytes (Farmer, Moore, and Walker), and it has also been demonstrated that the leucocyte is peculiar among the normal non-productive cells of the body in having already undergone nuclear divisions peculiar to cells undergoing preparation for conjugation (C. E. Walker). It is possible, therefore, that the fully developed cancer cell may be the offspring of a fixed tissue cell and of a wandering leucocyte, both cells having undergone the nuclear metal morphoses of reproductive tissue. Shoud this be so it is only reasonable to expect that the resultant cancer cell should participate in the varied capacities of its two-fold heritage. Hence may be the reason why the cancer cell, while retaining many of the structural features of the tissue of origin, has come to acquire in so high a degree the additional capacity for wandering, for infiltrating, for infecting.

LADINSKI'S SIGN OF PREGNANCY.

The notorious and confessed inability of medical men positively to diagnosticate the existence or non-existence of pregnancy during the early months and the fact that sooner or later pregnancy shows itself probably accounts for the rather small amount of study that has been given to the signs of early gestation. Yet the importance of some means of making a positive diagnosis cannot be denied, for innumerable instances arise when it is essential to the interests of the patient for one reason or another.

Impressed with these facts Dr. Louis J. Ladinski, of New York, during an experience of fifteen years, has concentrated his attention upon the study of the changes which take place in the uterus during the early months of pregnancy. As a result of his studies he finds that a particular sign, which is described below, is positive in the great majority of cases. No statistics are given in his article on this subject but the author says the sign is invariably constant and that he considers it as reliable as any of the positive signs of advanced pregnancy. Numerous investigators and observers before this time have described certain peculiar changes in the consistency of the uterus which were advanced as positive signs of pregnancy, but their descriptions and their interpretations have differed very materially from each other and from the sign which Ladinski describes. Thus Von Braun speaks of a change which consists of "a more or less longitudinal furrow, dividing the uterus into two halves, one of which, usually the left, is softer than the other." Laudan found compressible points at the uterine cornua. Lohlein and Gardner call the changes "a cystic softening of the uterus." Dickinson describes "a bellying or bulging of the fundus and elasticity of the body of the uterus" and considers it a positive indication of pregnancy. Hegar's sign is well known, first described by Rheinl in 1884, and according to Ladinski it was while

looking for this sign that he first noticed and subsequently developed the peculiar sign which he considers pathognomic of pregnancy. The sign is described as follows in the author's own language:

"Frequently as early as the fifth week, but always in the sixth week, there can be felt in the median line in the anterior wall of the body of the uterus just above the junction of the body and cervix, in other words in the isthmus of the uterus, a circular area the size of the tip of the finger, which presents to the palpating finger the sensation of an elastic fluctuation.

"As pregnancy advances this area increases in size in a crescentic manner, until between the third and fourth month, when nearly the entire anterior body, with the exception of the upper crescent of the fundus, partakes of this change, and gives the cystic fluctuating feel to the examining finger. The change appears in the anterior wall of the uterus when the uterus is in the normal position or slightly anteverted, but in extremely retroverted or retroflexed uteri the elastic area appears in the posterior wall, but instead of being perceptible in the fifth or sixth week of pregnancy, is usually felt in the sixth or seventh week.

"In incomplete abortion or subinvolution there is a change in the consistency of a similar area of the uterine wall, but while in pregnancy the feel of this area is distinctly elastic or cystic, the sensation obtained in subinvolution and incomplete abortion is very soft and doughy. The two conditions can very readily be differentiated."

The only condition in which this sign is found other than in normal pregnancy is when a soft myoma, or cystic fibroid, is situated in the anterior wall of the uterus. The elastic or cystic character of the area is emphasized as the differential point.

While we consider this report with a certain quality of reasonable skepticism, still there is every reason why medical journals should endeavor to stimulate the profession to take up the observation and study of anything which might prove of such inestimable value as a clinical sign which would make possible a positive diagnosis of pregnancy during the early weeks of gestation. It is never wise to conclude that any new thing is valueless until we have proved it. Whatever progress has been made in the world of science has been accomplished largely in the face of skepticism, unbelief, and sometimes violent oppositions. After a great number of observers have studied this new sign of pregnancy in a great number of cases it will be time enough to accept it as definitely proved.

DR. R. H. LEWIS ELECTED PRESIDENT.

At the recent meeting of the American Public Health Association at Atlantic City, Sept. 30-Oct. 4, Dr. R. H. Lewis, of Raleigh, N. C., was elected president. This association is composed of members from the United States of America, Dominion of Canada, Republic of Mexico and Republic of Cuba. It is therefore no small honor which has been conferred upon Dr. Lewis and we rejoice with his many friends in his election to so high and distinguished an office. Dr. Lewis has served his native State long and well as a member of the Board of Health. Since 1893 he has continuously served as Secretary of the Board, and the profession knows how efficiently he has filled that important office. Prominently identified with every movement toward betterment of health and hygiene in North Carolina, and a close student of sanitary matters, no man is better fitted for the position to which he has been elevated than is Dr. Lewis and none will fill it more worthily. We congratulate him as we do the association he honors.

DR. McCAMPBELL CHOSEN AS DR. MURPHY'S SUCCESSOR.

The Board of Directors made no mistake when they chose Dr. Jno. McCampbell as Superintendent of the State Hospital at Morgantou. As successor to the late lamented Dr. P. L. Murphy no better man could be found than him upon whom the mantle has fallen. Dr. McCampbell is a young man who has risen from the lowest place in the institution to the highest, and he has succeeded by sheer worth in placing himself in a position of honor and trust. Born at Obington, Va., he has spent most of his life in Western North Carolina, his parents removing to Yancy county during his infancy. Educated at Burnsville Academy, he was graduated in medicine from the Baltimore Medical College in 1894. Having been licensed by the State Board of Examiners he accepted the position of druggist at the State Hospital under Dr. Murphy. That was fourteen years ago. From the position of druggist he became in course of time one of the assistant physicians, and finally first assistant, which position he occupied until the death of Dr. Murphy. When, by reason of failing health and illness, the latter became unable to bear the burden of management, Dr. McCampbell assumed fully the duties of superintendent and, for a year preceding Dr. Murphy's death, had been in charge of the work. That he did his work well is demonstrated by the esteem in which the promoters held him and the fact that they deemed him worthy of the highest office.

The Charlotte Observer says of him:

Dr. McCampbell is of the best type of our sturdy mountain people. Rightly endowed with common sense, forceful in character, a fine physician and alienist, self-poised, serious-minded and reserved, his dignity commands respect and one cannot come in contact with him without being impressed by him. He is a man of reading, of executive ability and all other kinds of needed ability. He is not an experiment but has already won his spurs. The people of North Carolina will learn that no mistake was made in the election to this responsible office of this strong, grave, taciturn young man.

DR. H. A. McSWAIN.

Dr. H. A. McSwain died Oct. 8, 1907, at the home of his daughter at Rocky Mount, aged 76 years. He was a prominent physician of the northern part of Cumberland county, and for years was also in the practice of his profession in Fayetteville.

DR. PARROTT RETIRES.

The Journal notes the retirement of Dr. Jas. M. Parrott, Kinston, N. C., from general practice. He now devotes his whole time to the Diseases of the Eye, Ear, Nose, Throat and to General Surgery. The Journal wishes for him success in his special work. His past successes are sufficient guarantee that he will attain to yet greater.

AN ACKNOWLEDGEMENT.

The Journal desires to acknowledge itself in error in its failure to give due credit to the Interstate Medical Journal for the original production of the article entitled "Modern Aids to the Torture of the Sick." In our miscellaneous colums of the October issue credit was inadvertently given to the Western Medical Review for this article. We regret the mistake and take this method of apologizing therefor.

THE NORTH CAROLINA MEDICAL COLLEGE.

The North Carolina Medical College entered on the first year of its existence in Charlotte, Oct. 2, '07, with most encouraging prospects. It is under very auspicious circumstances that this school is now located in Charlotte, a city which will afford many advantages to which the school has hitherto had no access. And the city is proud to boast of such a school. It is not as if it were a new and untried venture, for the North Carolina Medical School has been thoroughly established and its reputation has become known far beyond the borders of the old North State during the years of its existence at Davidson, N. C. And so it starts out in Charlotte with a reputation already made for thoroughness of work and scholarship. There is reason to believe that the coming years will witness a yet greater development in its scope and usefulness. A splendid new building, with all modern equipment; a faculty of leading specialists, many of them experienced teachers, five hospitals, and a city of forty thousand inhabitants which furnishes abundant material for dispensary and clinical work bring to the Southern student advantages which he need not go far to seek.

The opening exercises were held in the ampitheatre of the new college building at the corner of Sixth and Church Sts. Dr. W. O. Nesbit, dean of the faculty, presided, making a short speech of welcome on behalf of the faculty to the students and to visitors present. Referring to Dr. J. P. Munroe as a "bald headed bachelor and a father—of the North Carolina Medical College," Dr, Nesbit occasioned much mirth at the good doctor's expense and elicited a response which sparkled with good humor.

The clases have at this time been running for six weeks and work is progressing in earnest.

DR. J. W. WHITE.

Dr. J. W. White, of Lancaster, S. C., died Nov. 5th. after a lingering illness at the home of his son, Mr. J. Webb White, in Spencer, N. C. Dr. White was 68 years old and for years was a prominent physician in South Carolina, having a large practice in and around Lancaster. His healty having been very bad, for some time he has made his home with his son in Spencer. The remains were taken to Lancaster for burial.

TENTH DISTRICT MEDICAL SOCIETY.

The Tenth District Medical Society, of the North Carolina Medical Society, which met in Hendersonville Nov. 5, in semi-annual session, adopted a resolution requesting the State board of health to proceed at once to perfect arrangements either by purchase or by the establishment of a plant, for the free distribution of diphtheria antitoxin to patients needing the same and unable to pay therefor. It was also decided by the society to urge the next Legislature to appropriate sufficient funds to the State Board of Health to carry the resolution into effect. The matter came up during the discussion of diphtheria and the statement by one of the physicians present that recently, during a diphtheria epidemic, in his county, he had lost several patients because they were too poor to buy the anti-toxin led to the adoption of the resolution. The society will meet in Asheville next year.

Review of Southern Medical Literature

Atlanta Journal-Record of Medicine, Sept., 1907.

The Treatment of Burns.—Dr. F. K. Boland believes that the primary treatment of burns is planned to combat pain, shock, and infection. The best remedy for shock has been shown by Crile and others to be adrenalin chloride given hypodermically (gtt x of 1-1000 sol.), or better in normal salt solution (3i of 1-1000 to 1 quart) subcutaneously or per rectum, or in desperate cases half the quantity intravenously. It is well to remember that a burnt area is apt to be sterile on account of the great heat which has produced it, and if infection be not added to the wound by unclean handling much will have been done towards hastening the patient's recovery and lessening the amount of cicatrix which may result. The injured part should be cleansed gently with boracic acid or saline solution and bits of necrotic tissue removed. It is not best to open blebs at the first dressing since it only opens up new avenues for infection. Open so that the collapsed bleb falls down as a skin graft. A one per cent. aqueous solution of picric acid applied on sterile lint make best first dressing. It alleviates pain and has an advantage over carron oil in its cleanliness. The yellow stain may be removed with alcohol, ammonia or oxalic acid. After the dressing is applied do not allow it to get dry, but keep moist with one-half strength of same solution. The dressing should not be changed oftener than every 48 hours, unless infection has taken place. In such a case the treatment is directed to the infection by using antiseptic dressings. It must be borne in mind that a burnt surface absorbs readily and strong chemical solutions are dangerous. A few cases of picric acid poisoning have been reported. The wound is kept clean with mild antiseptics and picric acid reapplied until healing takes place or granulation commences, when usually some mild ointment is indicated. If granulations are slow or exuberant nitrate of silver is indicated, and if this does not heal promptly no time should be lost in resorting to skin grafting.

Southern Medicine and Surgery, Sept., 1907.

Diseased Tonsils.—Dr. C. M. Miller says that besides being a port of entry for bacteria the enlarged tonsil presents many symptoms as a result of the local irritation caused by its presence in the throat. It may be sufficiently large to obstruct breathing in children. The author has never seen hypertrophy of the tonsils unaccompanied by adenoids in the nasopharynx, and such patients are always mouth breathers, if not during the entire time at least while they are asleep. There may be a constant irritating cough without expectoration. The breath is frequently foul as a result of decomposition in the tonsillar crypts; this is accompanied by a bad taste in the mouth and unclean teeth. Such people frequently suffer from a most intractible form of indigestion which will yield to no form of treatment that does not include removal of the offending tonsils. Chronic pharyngitis with constant hawking and frequent gagging, especially before breakfast, is by no means infrequent, and is a most annoying symptom. Deafness as caused by enlarged tonsils is not due to pressure of the tonsil upon the eustachian tube but to extension of inflammation or to the hypertrophic condition of the tube; it is possible, however, for the tonsil pressing up the palate to relax the tensor tympani muscle and hinder in this way its action of opening the tube; such deafness is not cured till some time has elapsed after operation for removal has been done. The presence of enlarged tonsils is a constant menace to the integrity of the ears, as they impede the normal drainage of the ear by causing closure of the Eustachian tube, as above mentioned, and the result may be either acute or chronic catarrhal or suppurative disease. The treatment is essentially surgical and no method short of removal of the tonsils will avail.

Before removing the tonsils we should eliminate as far as possible all conditions that will give rise to serious hemorrhage. Haemophiliacs should not be subjected to cutting operations.

The Louisville Monthly Journal of Medicine and Surgery, September, 1907.

Some Points on Typhoid Fever.—Dr. J. B. Marvin gives the following under the treatment of hemorrhage: The mere fact that a number of remedies are recommended for hemorrhage is the strongest testimony that we have not a real remedy. It staggers my credulity when you say use iron, sulphate, or opium, or acetate of lead by the mouth to check a bleeding vessel down in the ilium or perhaps in the colon. I believe we would do just as much good to take those remedies by the mouth to stop a bleeding toe. I have usually relied upon quiet, rest, and hypodermic injection of morphia. Collapse is added to hemorrhage in some cases. Recently I have adopted the plan of washing out the bowel with ice water, using a rectal tube and inserting it in the rectum four or five inches, allowing the water to run in, then lowering the back and letting it run out. I have also been

using calcium chloride in doses of ten to fifteen grains. Gelatin, I think, has proved a failure. The more I see of typhoid fever the less narcotic I use. It masks the symptoms. Hemorrhage may be the forerunner of perforation; perforation means death unless the surgeon operates very soon after it occurs. If the physician has masked the symptoms by quieting the patient with opium and perforation should follow a fatal result is almost inevitable.

Intestinal Antiseptics.—There are no safe antiseptic agents which produce a distinct effect in reducing intestinal putrefaction, much less checking it. If the patient will tolerate it I prefer turpentine. I sometimes use salol. I have sometimes thought this was doing good and then found the salol tablet in the bed-pan. Proper food, less food, or no food and plenty of water are the best intestinal antiseptics. Those cases in which we have renal involvement, albumin in the urine, tube casts, etc., may it not be due to the typhoid bacillus or perhaps to association with the colon bacillus? In these cases Urotropin has been my standby. I do not give it in large doses. I have seen large doses daily cause blood in the urine.

Nashville Journal of Medicine and Surgery, September, 1907.

Post-Typhoid Bone Lesions.—Dr. W. H. Bryan believes that the period elapsing between the initial symptoms of typhoid fever and the earliest manifestation of a resulting bone infection varies widely. Frequently it is claimed that bone infections manifest themselves during the third week of the fever or during convalescence. When they occur at this time they are frequently acute and either run and finish their course as acute or later assume the chronic type. But that typhoid germs may be latent for indefinite periods and then kindle a distressing and dangerous pathology there can be no doubt. Many cases are reported in which the intervening period has extended for several years.

The symptoms of these post-typhoid bone lesions do not differ materially from the ordinary types; the pain, the fever, the local signs of inflammation generally, and the course of the disease are nothing unusual. A point to be remembered is that the pain comes frequently very circumscribed in area so that the patient will place his finger upon a spot and tell you the pain is confined to that point. This is often true when the pain is intolerably intense and has served the author well in one instance where the sinus seemed lost in an abscess cavity and offered no clue to further extension of the incision. Although the abscess cavity covered a large surface over the ribs the author sought the site of the original pain as the probable point of necrosis and found it just there. When an abscess forms thus over the chest from osteomyelitis of the ribs it is a remarkable fact that rupture of that abscess is always external and never in the pleura. After pus forms and rupture occurs or incision is made then as usually a sinus remains and the contents of its discharge depends on the infection and the underlying pathology. Post-typhoid bone lesions have a habit of improving apparently for a time and then relapsing to their former state or worse.

Treatment consists in thoroughly removing the diseased areas of bone and such other means as are at our command for the cure of osteomyelitis.

Atlanta Journal-Record of Medicine, August, 1907.

Care of the Consumptive.—Dr. L. C. Rouglin says that it is the duty of the physician to himself and to the State that he rigidly enforce all the rules and laws of prophylaxis, and observe and carry out all regulations prescribed by his physician, for it is on the patient himself by his care and general hygienic conduct and rigid observance of prescribed measures and precautions that a cure largely depends. He owes it to himself in order to once more become a useful member of society to protect his family, neighbors, and attendants from contracting this dread disease by heeding all sanitary precautions prescribed for his conduct. He should abstain from kissing, marrying, and, if a woman, from nursing while suffering from consumption.

The consumptive may obtain the benefit of pure fresh air at home by the arrangement of a window tent as suggested by Dr. Knopff. This can be arranged for at a very little expense to the patient and serve the double purpose of giving the patient the benefit of fresh air at home and preventing the rest of the room from being contaminated with tubercular bearing dust particles and sputum. The principle on which this tent is made consists of an awning attached to a window inside instead of outside of a room and attached to the bed and so arranged that air from the room cannot enter nor mix with the air from the tent. The tent loaned to the author by the manufacturers, Messrs. King-Scheerer Company, is constructed of a series of four frames made of Bessemer rods and is covered with seven ounces extra thick sail twill properly fitted and having elongated ends to admit of their being tucked in under and around the bed ding to prevent cold air from entering the room. A little pulley is attached to the

upper portion of the window and with the aid of a cord the patient on entering the bed lowers the tent over him. A celluloid window placed in the middle of the tent serves to make the patient feel less outdoors, also for an observation window for members of the family and nurse. In winter patient should be covered with sufficient blankets to insure warmth and comfort and should wear a sweater and protect his head by means of a woolen helmet or shawl when sleeping outdoors in cold weather. When in bed the patient should be provided with a flask for his sputum, a urinal and a bell by means of which he can summon the nurse or friends in the house for communication.

New Orleans Medical and Surgical Journal, September, 1907.

Round Ligament Suspension for Retrodisplacements of the Uterus.—Dr. C. J. Miller gives the following under the section Technic of the Operation: There are many excellent methods described, viz: Gilliam's Ferguson's, Simpson's, Dudley's and Montgomery's, all based upon the same principle; and differing only in the manner of reaching and fixing the loop or ligament. Montgomery prefers the abdominal creseutic shaped incision, which gives a good view of the anterior pelvic structures, but this is its only advantage. It has distinct disadvantages, if growths, inflammatory processes and adhesions are to be dealt with in the deep pelvis.

The technic the author has found most satisfactory is as follows: 1st. Complete all work necessary in the pelvis, such as removing adhesions, diseased adnexa, etc., and bring the uterus into the normal position. 2. Expose the edges of both recti muscles by splitting their sheaths. 3. Pick up each round ligament with catch forceps about one and one-half inches from the fundus and pass under them a needle carrying either catgut or silk to be used as bridles. 4. Pass a pair of long artery forceps preferably cured into the edge of the abdominal incision at the lower angle between the rectus muscle and its anterior sheath. This is made easier by lifting the abdominal wall with a retractor and making traction on the bridle around the ligament. The point of the forceps is pushed to the opening through which the ligament leaves the abdomen and is carried over the pulley of the ligament between the folds of the peritoneum. The peritoneum is perforated, the bridle is seized and the forceps withdrawn. This is repeated on the opposite side. 5. The loops of both ligaments are then teased through these new grooves and lie upon the exposed recti muscles. They are then adjusted by sliding the proximal, or distal, end of the loop to equalize tension and are held taut until the peritoneum and recti muscles are sutured. The ligaments are then stitched together as they lie upon the recti muscles and the aponeurosis closed over them. 6. If the folded ligaments cannot be approximated to allow stitching them together they may be disposed of by stitching them to the aponeurosis as performed by Montgomery. It is best, however, to unite them when possible, for in their new position they lie on muscle and are covered entirely by the aponeurosis and are not so liable to become strangulated as when pulled through the fascia. 7. The abdominal incision is closed by tier sutures of catgut, reinforced by one or two silk worm gut sutures. Uncomplicated cases may be completed in fifteen minutes. The round ligament pull is in the middle line and the ligament is made doubly strong. It is not necessary to insist that this operation is simply one of many expedients that may be necessary in a given case. All necessary plastic work must, as a matter of course, be completed before opening the abdomen.

Virginia Medical Semi-Monthly, Sept. 13th, 1907.

Principles of Surgery, Lecture XXXV, Anthrox, Glanders, Actinomycosis, Symptoms, Definition, Cause, Pathology, Diagnosis, Prognosis, Treatment.—By Dr. Stewart McGuire.

The Southern Practitioner, September, 1907.

The Factors which Influence the Permanence of Cure in Operations for Cancer of the Breast.—Dr. W. D. Haggard says that as long as eighty or ninety per cent. of lumps in the breast are or will become malignant they are much more serious than any intra-abdominal complaint and should be examined with the same zeal that has characterized our efforts in unraveling the pathology and cause of disability in the abdomen. As Rodman has said it is more important to make an early diagnosis in cancer of the breast than it is appendicitis. Some of these cases may and do get well without operation, whereas neglected operations in breast cancer leads inevitably to the most loathsome and horrible of deaths. Women with lumps in their breasts do not understand their danger. They are afraid of operation on account of ignorance of its safety and the great probability of permanent cure in the early stages because of an unfavorable result in some friend who was probably operated on in an advanced stage.

But worse, she may be illy advised by the ultra-conservative physician or surgeon, who, although honest, is not keenly alive to the burning fact that the mammary lumps are nearly always malignant or will become so if left alone, and gives the fatal advice to "come beck in the fall" or "not to bother it until it bothers you." External cancer does not kill locally but always through metastasis and almost universally by the lymph streams. It therefore may be stated as a surgical axiom that has been proven up to the hilt that cancer is a curable disease when situated in an organ or tissue which of itself is removable without causing death, provided it has not extended beyond its immediate or primary lymph efferents which are also completely removable. It is now generally recognized that in young subjects cancer is particularly pitiless on account of the active and succulent lymphatic dissemination. This is very much more rapid in the young, just as all other functions are. The younger the patient, therefore, the worse the prognosis. In elderly persons where there is a general atrophy of the lymph system and changes in all the vessels dissemination is more slow, cancer will remain local a longer period of time. The older the patient the better the prognosis. In the breast there are six routes of lymphatic distribution. The first and more common is the axillary region. Second, the neck extension occurring over the clavicle, and aleo under it. Third, the anterior thoracic glands through the lymphatics that return with the intercostal vessels. Fourth, the posterior thoracic glands involved by the lymphatics of the internal intercostal muscle. This extension is almost inevitable when the gland is fixed to the chest wall Fifth, across to the sister breast. Sixth, down the epigastric fascia into the abdomen.

The Southern Clinic, September, 1907.

Report of a Case of Reflex Bronchial Asthma Caused by the Presence of Nasal Polypi.—By Dr. C. M. Sandusky, Jacksonville, Fla.

The Alabama Medical Journal, Aug., 1907.

Symptoms and Differential Diagnosis of Organic Heart Disease.—Dr. R. M. Cunningham says under the section on Points of Difference in Structural and Talvular Lesions that in structural lesions the dyspnoea is less marked, more easily excited by exercise, is not so frequently relieved by appropriate treatment, and there is often pallor instead of cyanosis; there is less dropsical manifestation, both in extent and in amount, and as a rule, less severe but more constant digestive disturbances, and also the effect upon the secretion of urine is less marked. On the other hand there is greater prostration, weakness, general debility and nervous symptoms, syncopal, apoplectic, epileptic, etc. The response to treatment is much less satisfactory and there is greater liability to sudden death and anginal symptoms much more common, often ending in death by an attack of angina vera. In Valvular Disease the physical signs are as follows: 1. Enlargement of the heart structure from hypertrophy and dilitation. 2. Permanent murmurs of the primary obstructive or regurgitant; and transient murmurs due to relative insufficiency. 3. Apex beat displaced and during compensation much more intense and larger area; in broken compensation the stroke is weakened, less distinct at one point and more diffuse. 4. When heart sounds are exhausted or marked by the murmurs they are loud and distinct, often accentuated in pitch, particularly the second sound. 5. Less tendency to erythmia and changes in qualities of the pulse except the changes characteristic, when present, of the lesion. 6. Enlargement of veins of chest and abdomen and lower extremities and lower rectum often present. 7. Venous pulsation and augmented pulsation of arteries often present. 8. Often enlargement of liver and spleen. In Structural Disease the physical signs are: 1. Heart not enlarged, except towards the end slightly enlarged by dilatation unless the changes are secondary to hypertrophy. 2. Permanent murmurs absent as a rule; transient murmurs due to relative insufficiency from dilitation—when present not so distinct and marked. 3. Apex beat in normal site much weakened and less area; in dilitation the beat very weak, larger in area but not so large as in valvular disease. 4. Heart sounds are less intense, shorter second, often lower in pitch. 5. Arythemia almost constant and decided alterations in the qualities of the pulse. 6. Rarely are the veins of the chest and abdomen, lower extremities and lower rectum enlarged. 7. Venous pulsation rare, and increased arterial pulsation never. 8. Enlargement of the liver and spleen rare and never so marked.

The Texas Medical Journal, Sept. 1907.

Some Pathological Causes of Dysmenerrhea.—Dr. H. K. Leake believes that obstructive dysmenorrhea is "a condition, not a theory" but commonly a theory unsupported and overworked. He has observed patients with obstinate stenosis of the cervical canal, the result of unskillful amputation of the cervix sloughing after labor, the use of escharotics without previous dilitation and rough usage by instru-

ments. A lady was operated upon at Strassburg, Germany, for disease of the cervix by circular amputation, followed by tortuous contraction of the remainder of the canal, and for the relief of which incision and periodical dilatation was necessary until the menopause. Another patient presented a so-called asexternum hidden in a deep recess surrounded by dense exudate reaching out into the base of the broad ligament, which represented the original tear. She declined operation. A pinhole os is the bigbear of some physicians but the author has many times seen the menstrual blood trickling through it in patients without dysmenorrhea. A lady of good physique complained of sterility and dysmenorrhea. Examination showed a pinhole os and undersized uterus. The author prophesied sterility and, unless the adnexae were removed, continued dysmenorrhea. Several years afterwards she returned and exhibited a lusty boy to discredit his pathological acumen. Her dysmenorrhea had vanished. The author knows little of the stenosis of the isthmus and still less of that of the os internum. The point of the sound may engage in a fold of the mucus lining or be resented by a sensitive internal os, or the cervix may be flexed forward and thus mislead the examiner where gentle skill and perseverance might overcome the apparent stenosis.

Book Notices.

The Diagnosis and Treatment of Diseases of Women. By Harry Sturgeon Crossen, M. D., Illustrated. C. V. Mosby Medical Book and Pub. Co. St. Louis, 1907.

This work devoted exclusively to diagnosis and treatment of women's diseases is unique. Etology, pathology and major surgical technique are not considered except so far as it is absolutely necessary. Special consideration is given toward removing certain difficulties constantly encountered in gynecologic work: viz, that of determining exactly the conditions present in the pelvis, and the lack of a clear understanding of the indications governing the selection of the treatment best adapted to each of the various classes of cases under each disease. The subject is presented in a clear, concise manner and so systematically arranged withal that the mutual relation of facts and their relative importance are appreciated without confusion. A most attractive feature of the book is the vast number of beautiful and well selected illustrations, many of which are original, although the majority have been reproduced from standard works.

As a sample of the book-makers art and aside from its truly genuine worth the work is exceedingly attractive.

Heart Disease and Blood Pressure. A Practical Consideration of Theory and Treatment. By Louis Faugeres Bishop, A. M., M. D., Second Edition. Price $1.00. E. B. Treat & Co. New York, 1906.

The systematic study of Blood Pressure and the wide spread interest in the subject has given rise to much theorizing and a great mass of literature of variable worth. Dr. Bishop has presented the results of his study and direct observation during a period of years. Although a very small volume, it is surprising how much valuable information is comprehended in such small space.

Essentials of Medical Gynecology. By A. F. Stephens, M. D., Prof. of Medical Gynecology in the American Medical College, St. Louis, Mo. 12mo, 428 pp. Fully illustrated. Cloth, $3.00. The Scudder Brothers Co., Publishers, Cincinnati, Ohio.

In this work the subject is considered from the standpoint of the medical practitioner. The treatment is based upon the electic practice of Specific Medication.

Rontgen Rays and Electro-Therapeutics. With chapters on Radium and Phototherapy. By Mihran Krikor Kassabian, M. D. J. B. Lippincott Co. Phila. & London.

This volume is one of Lippincotts' "New Medical Series" Edited by Dr. Francis R. Packard. The author has presented the subject in a most comprehensive form. Although condensed, nothing of clearness is sacrificed but the theories and applicetions of electro-therapeutics and the Rontgen rays are so concisely stated that his work must immediately become invaluable to those engaged in the application of electrical energy to the domain of medicine. No more thoroughly practical work has appeared. The initial portion is devoted to the subject of electro-therapeutics, which gradually leads up to an elaborate description high-frequency currents. Then follows an exhaustive study of X-rays with a thorough discussion of radio-photography and skiagraphy. Methods of application and dosage in the various diseased tissues are described. The chapter on rodium and radio-active substances treats the subject very briefly. It is however to be realized that our knowledge of the therapeutic uses of radium is too limited to warrant a very enthusiastic acceptance of its value.

A Text-Book of Physiology. By Isaac Ott, A. M., M. D., Professor of Physiology in the Medico-Chirurgical College of Philadelphia. Second Revised Edition. Illustrated with 393 Half-tone Engravings, many in Colors. Royal Octavo, 815 pages. Bound in Extra Cloth. Price, $3.50, net. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia, Pa.

The early appearance of a new edition of Dr. Ott's well known work on Physiology speaks forcibly for its excellence. It incorporates much that is new, but only those things which have received and borne the test of sufficient scientific investigation. The science of physiology is undergoing most rapid development, and in order that a book on the subject may remain up to date there must be constant revisals and additions.

Dr. Ott has enlarged the book in many ways. The subject of electro-physiology has been treated more comprehensively than in the first edition, the article on the Sympathetic system has been rewritten and new acquisitions in this direction have been incorporated. Many new and original figures and illustrations have been inserted. On the whole the book is excellent.

Disorders of Respiration and Circulation Symptomatology and Diagnosis Part I; Dyspnoea and Cyanosis. By Prof. Dr. Edmund Von Neusser, Professor of the Second Medical Clinic, Vienna. Authorized English Translation By Andrew MacFarlane, M. D. Price $1.50, E. B. Treat & Co., Publishers, 241-243 West 23d Street, New York.

In order to be thoroughly understood and rationally treated, disease must be studied paimarily in its entirety as a pathological process. The physician cannot absolve himself from this responsibility nor find any easy road through the work of another to this desired goal.

The all-absorbing search for the specific cause of a disease, although most valuable when indicated, has too often pushed into the background the manifest clinical evidences of the disease, and the physician has regarded them of subordinate value and apparently even of negligible worth.

The diagnosis of disease must, in the great majority of patients, be determined at the bed-side and not in the laboratory. Laboratory findings are most valuable aids to diagnoses but are not, except in a few instances, diagnoses themselves and never substitutes for clinical bed-side work.

This monograph accentuates the value of the study of symptoms as observed at the bed-side of the patient and reproduces the marvellous clinical pictures of Trousseau, Niemeyer, Sydenham, Flint and others, illuminated by present-day knowledge of pathology and clinical methods.

Prof. Edmund Neusser, with his rare diagnostic instinct and his almost uncanny memory of clinical facts and their correlation to pathological findings, typifies in the strict sense the modern master clinician.

These lectures are the resultant of almost limitless clinical material and of a scientific acumen which does not over look any fact no matter how seemingly trivial and unimportant.

The Aged Austrian Monarch.

With Francis Joseph will, in all human probability, pass away the last monarch who, living and dying, has worn on his brow the dual crown of St. Stephen and that of the ancient German-Roman Empire. And with him will also vanish the most picturesque figure among the rulers of our day. During the sixty years of Queen Victoria's reign the nations over which she held sway passed through momentous stages of their development, and to be a Briton meant something very different at her death from what is had meant when, in 1837, she, a blushing, blooming maid of eighteen, had first tasted the sweet and bitter of royalty. The parallel between her and Francis Joseph holds good in more ways than one. But with the sole exception of France, no country has undergone such striking, thorough changes of recent times as has Austria in the single reign of Francis Joseph.—From "Francis Joseph of Austria-Hungary," by Wolf von Schierbrand, in the American Review of Reviews of November.

The Internal Secretions and the Principles of Medicine. By Chas. E. de M. Sajous, M. D. Vol. II. Illustrated. F. A. Davis Company, Publishers, Philadelphia. 1907.

It is entirely impossible to give, within the short space of a review, any adequate idea of the vastness of the knowledge embraced in the work of Dr. Sojous on the role of the internal secretions. Even a summary of so great a book is out of the question. The work is the result of the author's studies of the ductless glands and the part played by them in the defense of the body against disase. Of still greater importance, at least to the physician, is the fact that these defensive functions may be enhanced by appropriate remedies. A new and scientific foundation for therapeutics, a branch of medicine which has lost in recent years the confidence of the profession. Many obscure questions are elucidated and

for the first time made plain.

To much cannot be said of the book The mere fact that it comes from so eminent an authority as Dr. Sajous is sufficient guarantee of its worth.

Abstracts of the Leading articles of the month.

Bismuth Subnitrate Cure in Affections of the Stomach.—Lion (Archives des maladies de l'apareil digestif) points out the fact that this remedy was appreciated highly by Trosseau and other physicians of the last centry, but its use was almost entirely abandoned, because of the frequency of cases of poisoning, due to impurities in the drug. Recently its use has been revived, especially in Germany. Hayem, at the Congress of Lisbon, gave a masterly review of its therapeutical application. In its pure state, as now provided, it is absolutely innocuous. It is especially valuable in all cases of painful gastritis. It acts favorably on gastrorrhagia, and it also reduces abnormal fermentations Owing to its chemical effect upon hydrochloric acid, it has been especially employed in the condition of hyperchlorydria; but, as shown by Hayem, it can be used with equal success in hypopeptics and even among apepties. The improvement is prompt and the relief very marked in all cases of the stomach (early or late pains, cramps, burnings, intolerable pains, sensations of weight, uneasy feelings, unseasonable pangs of hunger, etc.) In seven cases it may be impossible to give the bismuth at the beginning; but as soon as the acute period has passed, it can be exhibited with the most favorable results. Its calming effects are obtained generally during the second or third day of treatment, but more frequently not until the sixth day. In nervous dyspepsia, and in gastric crises of central origin, only temporary relief can be looked for. In gastric ulcer, its use has become classic, it relieves pain, but they are only temporary, and the properties favor rapid healing of the leasion. Even in cancer of the stomach, its beneficial effects are sometimes remarkable in relieving pain, stops reflex irritation, and its protective patients are obliged to take it constantly. This very fact of its long continued use is an indication of cancer of the stomach, which of itself may have some value in a case of difficult diagnosis. Bismuth subnitrate has a positive effect upon the reflex phenomena; reching, vomiting eructations, which all cease at the same time as the pain. In haematemesis or gastrorrhagia, it has been employed with advantage. In place of giving small doses, it is advisable to give a single large dose, once daily, while fasting, of 10 grammes in 150 or 200 grammes of water. In a certain case of ulcer, the author observed this favorable action, and also found that, on discontinuing the remedy, the pains and haemorrhages returned on two occasions; and that they again ceased upon resuming the treatment. The administration should be kept up for six weeks, in order to secure definite cessation of the accidents. The action of bismuth subnitrate in overcoming abnormal fermentation is of great service in numerous digestive disorders. There is only one contraindication to this remedy, and that is a stenosis f the gastrointestinal canal, wherever situated. In a case of cicatrical stenosis caused by a stomach ulcer, Hayem found a semi-solid mass of bismuth held together by mixture with mucus, and constituting a real foreign body, the formation of which should have been avoided. In cases of moderate stenosis, single doses of bismuth may from time to time be given with advantage, providing its elimination be carefully supervised. The tendency to constipation, which has been alleged to be caused by bismuth, is rarely seen, and when it occurs is easily overcome by enemata of olive oil. or by simple injections. Sometimes its prolonged use is attended by looseness of the bowels; but this is readily controlled by suppressing the remedy for a time, or by diminishing the dose.

The Composition of Human Milk and Its Chemical Analysis.—Lescoeur (Le Nord Med.) says that the apparent lack of total solids in some specimens of human milk that are analyzed to ascertain their power of nutrition, is due to the absence of a sufficient amount of cream. Now, it is noticeable that specimens of cow's milk taken at different times during milking will vary in the amount of cream, especially if taken in the beginning of milking, the most cream appearing in the last portion of the milk. The samples of human milk are always small in amount, and are not drawn so as to give a sample from the whole of the milking. Thus the amount of cream is not a true index of the richness of the milk. The

examination of the whey of the milk bears out this conclusion. Woman's milk coagulates without separataing like cow's milk, and when filtered properly it separates into a precipitate and an opaline liquid. The density of this liquid is of great importance. If normal the density will be 1,036; if below par the density will fall below that figure. In different nurses the quantity varies, while the quality does not vary materially. The density of milk is exactly proportional to the amount of solid matter contained. The chemical examination of human milk, then, is inexact and deceiving. Test of the whey, and determination of its density, is of value. The density, which varies between 1,026 and 1,033, serves as a practical basis for the classification of milk and its nutritive value. Variations depend on age of the milk, return of the menses, pregnancy, and sickness, and these affect especially the quantity and not the quality of the milk. In case of defective nutrition, substances may pass into the milk which will affect the health of the child, but these cannot be discovered by chemical analysis.

Tubal False Pregnancies.—Pichevin (Prog. Med.) contends that other pelvic conditions, especially salpingitis, simulate tubal pregnancy and render the diagnonsis exceedingly difficult. We make the diagnosis of tubar ppregnancy when, after non-appearance of the menses, there occurs a sudden attack of pain in the abdomen with hemorrhage from the vagina. The author describes two cases with symptoms that might lead to the diagnosis of tubal pregnancy, occurring, in young women, in whom the classical symptoms of tubal abortion appeared. In such cases the uterus is not very large, but may be somewhat so, especially when parenchymatons metritis exists. In some cases it is crowded upward and forward as by a pyosalpinx. Again, a uterus in a normal position is not freely movable. In Douglas' cul-de-sac is felt a resistance, elastic tumor. There is neither nausea nor vomiting, and there is at the time of the pain and hemorrhage no synocope or coldness of the extremities, and the face is not pale. It is found that the patient has felt hot rather than cold, and the taking of the temperature reveals a moderate rise of temperature for several days. The tumor in the cul-de-sac resembles hematocele. Generally the uterushasan elastic mass behind it. Sometimes it may be felt that there are two adnexal masses. The elevation of temperature arises from the eruption of a small amount of septic material into the Douglas' cul-de-sac which produces a reaction. Exact diagnosis depends on the finding of a lateral mass, tender to touch, accompanied by a rise of temperature. A small ovarian tumor which has become twisted, and is ocexistent with a pregnancy will give the same symptoms.

Genital Prolapse.—Denglade (Ann. de Gyn. et d'Obst.,) says that the cause of prolapsus is the weakening of the pelvic floor combined with the stretching of the ligaments. The object of treatment is to relieve the complications due to the lesions produced in the pelvic organs and those that result from general malnutrition and nervous conditions. The circulation of the uterus, ovaries, and tubes is interferred with, while the organs are submitted to numerous irritations from without; the cervix becomes ulcerated and hypertrophied. Histological examination shows the miscroscopic lesions of metritis which may be propagated to the adnexa. When adhesion occur the prolapsus becomes irreducible. Troubles of micturition, cystocele and calculus may occur, as well as kidney dieases. General symptoms are of the order of nenrasthenia. The author believes that prolapsus occurs only in those persons who are predisposed to it. In such persons there may be deformities of different kinds. The immediate causes are conditions that favor relaxation of the pelvic floor, such as labor, especially if frequently repeated. The author does not believe that tearing of the perineum is of as much importance as has been supposed, but that this is the secondary, not the primary lesion, since prolapsus exists in nulliparae in whom the perineum has never been torn. In some subjects there is a failure of general nutrition, as in rachitic subjects, combined with increased abdominal pressure, from increased weight or effort. In general prolapsus is insidious in appearance. As t therapeutic measures for the correction of prolapse, pessaries are discarded by the author as only palliative, and massage as not generally useful. Injections of paraffine and of quinine have been proposed, but are of little value. he author rejects the Alexander operation as giving no permanent results. Abdominal hysteropexy does not give lasting results and may produce complications should labor occur. Shortening of the uterosacral liga-

ments, to be of value, must be supplemented by perineorrhaphy and shortening of the round ligaments. Abdominal hysterectomy is in most cases a more severe operation than is necessary. Anterior colporrhaphy is useless without perineorrhaphy. Amputation of the cervix is unnecessary since its increased length is a result, not a cause of prolapsus.

Vaginal hysterectomy is to be used only under particular conditions when there are lesions of the uterus that demand its removal, such as fibroids. The author has employed with success a new procedure that originated in France. It consists of a resection of nearly all of the vagina and the exclusion of the uterus, which is crowded backward behind the line of sutures into the pelvic cavity. The uterus is then supported by a cicatricial column. A large lozenge is cut from the vaginal tissue with its long axis directed toward the meatus and perineum. The enclosed mucous membrane is then dissected out and extirpated. The operation is short, simple, and successful. There remains a vaginal cul-de-sac about three centimeters deep. The only disadvantage is the impossibility of sexual intercourse, hence the operation is appropriate only in old women. The exclusion of a mucous cavity within the pelvic cavity has not the disadvantage that might be expected, since the organ becomes atrophied. If necessary the uterus may be curetted first. Anterior myorrhaphy is a useful operation which leaves a firm pelvic diaphragm, which does not permit of cystocele or rectocele and leaves the uterus high up and in a condition of normal anteversion.

Hemophilia—Pathogenesis and Treatment.—Weil (Presse Medicale) in making a comparative study of the blood in hereditary and spontaneous hemophilia found that the blood in sporadic cases was thin and flowed too freely as well as too long. Clotting was very slow, but the clot once formed was of normal hardness and contracted well. The addition of calcium chloride hastened the process somewhat. The addition of a small amount of normal blood serum made the process entirely normal. The blood of cases of hereditary hemophilia, on the other hand, was found to be thick and viscid and it flowed slowly from a wound. The clotting was even slower than in the other condition, and the clot was not firm and adherent, but flocculent. The addition of calcium chloride hastened the process a little but had no influence on the character of the clot. The addition of such sblood to normal blood delays markedly its coagulation and renders the clot soft and friable. Intravenous injection of normal blood serum cured sporadic cases entirely, and caused some improvement in the hereditary form. These experiments show that sporadic hemophilia is due to the absence from the blood of some normal ferment or similar body, while hereditary hemophilia is due to the presence in the blood of some unknown substance which interferes with coagulation.

Observations on Epidemic Cerebrospinal Meningitis.—Daddi (Riv. Critica di Clin Med.) gives the results of bacteriological examinations of the cerebrospinal secretion from six cases of epidemic meningitis treated in the Florence hospital. It was confined to three filthy houses in the midst of other clean ones. Out of the six cases five showed the diplococcus intracellularis meningitidis of Weichselbaum, and one (the pneumococcus) of Frankel. The vitality of the germs obtained was slight; they did not live more than two or three days at the most; they developed slowly and sparingly at 28 degrees—30 degrees C. and best at 36 degrees—37 degrees C. In the presence of moisture they lived longer. We may state definitely that these germs are killed by drying and do not develop at the normal temperature of the body. The germs were not found in the nasal mucous membranes of five cases in which the secretion was examined. Inoculation of animals did not show the germs to be virulent. The agglutination of the blood serum of these patients was almost specific, occurring with the serum of other patients suffering from the same disease but not of those with other diseases. It did not occur in dilute solutions or at all periods of the disease.

Injection of Saline Solution Before Administration of Chloroform.—Burkhardt, Archiv. f Klinische Chirugie, states that the injection of saline solution before administration has a favorable influence in reducing the toxic action of the chloroform. He considers that this is the effect of the dilution of the blood by the salt solution, the coefficient of the absorption being reduced while the blood pressure is kept high; at the same time the vagus remains more sensative to stimuli. By this prelimi-

nary dilution of the blood, he claims, the organism can tolerate much larger amounts of choloroform without signs of intoxication The infusion must be given just before the operation and must be as abundant as possible. Besides the lesser reduction of the blood pressure, he asserts that the rapid recovery after the anesthesia is especially striking Owing to the lesser absorption of the chloroform, a larger proportion is eliminated by the lungs. The disagreeable by-effects, vomiting, headache, etc., are slight or entirely absent. These favorable effects of preliminary infusion of salt solution were so unmistakable in his experiments on animals that the method was introduced into the clinic at once. Each patient about to undergo a major operation received an infusion of from 1,500 to 2,000 c.c from a quarter to a half an hour beforehand The results were satisfactory. No by-effects from the infusion were observed. The patients all presented the same phenomena as the animals experimented on, namely, lessened tendency to lower blood pressure and the rapid recovery after the anesthesia. It was remarkable to observe the good pulse, even after prolonged general anesthesia, and the absence of headache, vomiting, or nausea These preliminary infusions seem to be indicated most for patients with dubious heart and kidney action and in case of much debility and low homoglobin percentage. In extensive operations on the urinary passages, he states that the infusion gives a certain feeling of security in regard to avoidance of the dangers inherent in protracted chloroform anethesia. Infusion after the operation seems to have little effect in mitigating the toxic action of the chloroform.

The Ovary of the New Born and of Children—Runge (Archiv fur Gynaekologie) has examined fifty ovaries of new-born infants and of young girls. In full term infants he was able to recognize a proliferation of the follicles. In the first year of life, the growing follicles attain a decided size; minute cysts are occasionally seen, and sometimes corpora albicantia are found. In the second year of life, the follicles are found still further developed, some of them containing ovula of a diameter as great as 135 micra, and showing other signs of ripeness of the ovule. In general, all ovaries at this age contain typical follicular cysts and corpora albicantia. In the third year, still further progress toward the adult type is noted. The promordial follicles become diminished in number, and the stroma takes on the adult appearance. With advancing years, the changes take place in corresponding degree; the whole appearance of the ovary assumes more and more that of the adult being, only of smaller size. It follows from these investigations that the growth and ripeness of the follicles in general in the ovaries of the newly born and of children is a physiological procedure. All these processes usually supposed to take place at or just before puberty, in reality appear normally and in chronological and progressive order one after the other in the fetus, the newborn infant and the child in the first years of life.

The Prodromal Period of Some of the Acute Infectious Diseases.—Goodall (British Medical Journal) deals chiefly with cases in which the initial symptoms are either unusual or not sufficiently emphasized in textbooks. The prodromal stage is that which intervenes between the first symptoms of illness and the rash or some other characteristic sign. In the majority of the cases of scarlet fever the prodromal period is short. Usually the rash comes out within forty-eight hours of the onset, and very often it is discovered as soon as any other symptom; occasionally it is delayed until the third or fourth day, and even longer As a rule, when the appearance of the rash is delayed, the case is one in which the throat symptoms are marked; these latter cases are frequently diagnosed as diphtheria. Vomiting is a very common early symptom of scarlet fever. Prodromal rashes are extremely rare, if they ever occur. The only sign of an attack of scarlet fever may be a punctate eruption. Diphtheria is so insidious in its onset that it is often well advanced before it betrays any sign of its presence. Croup may be the first sign of diphtheria. In rubella the rash appears synchronously with any other symptom. Prodromal rashes in measles are common, the most frequent being a punctate erythema; these cases are often mistaken for scarlet fever. The next most frequent rash in measles is an erythema consisting of small discrete papules, with blotches and irregular patches of confluent papules. Another prodromal rash is urticaria, which is usually universal. One may also meet with aan ill-defined erythematous mottling, especially noticeable on the trunk. Remissions are fairly frequent and may last from twelve hours to

four days, when the constitutional symptoms recur and the rash comes out. An early laryngitis is by no means uncommon and usually passes off when the rash comes out. Koplik's spots usually come out early, on the first or second day; sparse at first, they increase in number daily till the rash appears, when they rapidly vanish. The spots are pathognomonic, and it is their presence which enables one confidently to diagnose the disease in cases where the prodromal rash, the remissions, or the laryngitis are doing their best to lead us astray. Usually there is no prodromal period in varicella, and the erption is the first or among the first signs. Typhoid fever is the most protean in its mode of onset of all the acute infectious diseases.

Infantilism and Psychical Degeneration — Brissaud (Rev. Fran. de Med. et Chir.) says infantilism presents itself under various aspects. It is a condition characterized by the peristence of physical attributes of childhood long after that period of life has passed. There is an intimate relation between some cases of infantilism and myxedema. Myxedematous infantilism forms a well-defined type of the disease, of remarkable homogeneity. It represents the purest type of infantilism, producing not little old men nor women nor small adults, but large infants, who grow old as children. There is a definite and well-known pathology, the cause being alterations of the thyroid gland. The author records a history of such a case in which psychical degeneracy was combined with infantilism. In order to have a full development of the human system it is necessary not only to have nutrive material in abundance, but to have nutritive forces to direct their use. Heredity carries on these processes. A morbid, nervous heredity is responsible for the wrong direction of the nutritive forces; directly, by its immediate action on the ontogenic functions; indirectly, by its action upon the thyroid gland, and perhaps on the hypopysis and other vesecular glands. Psychical degeneration and infantilism both have the same cause, mental and nervous heredity, and may coexist in an individual and produce a mixed type.

Epilepsy in Childhood; Its Relation to Other Diseases.—Keeling (Brit. Jrnl. Children's Dis.) from a study of 150 cases and some review of the literature, summarized his conclusions as follows: 1. The pathology of epilepsy appears to resemble in some respects that of cerebral diplegia, chorea, paralysis agitans, neurasthenia, myoclonus and migraine. 2. Etiologically, rickets is an important factor in the causation of epilepsy. 3. A variety of epilepsy, which may be termed toxic epilepsy, is chiefly gastrointestinal in origin. 4. Reflex epilepsy is apparently rare, peripheral irritation probably plays a very small part in the production of the fits. 5. The effect of measles on epilepsy is uncertain. 6. Chorea is very rarely found associated with epilepsy. 7. Infantile paralysis, especially the congenital forms, are closely related to epilepsy. 8. An injury or a fright is frequently the exciting cause of a fit. Instrumental delivery may be followed by paresis with subsequent epilepsy 9. Enuresis is an occasional sequela of epilepsy, 10. The disease known as night terrors is probably a mild form of epilepsy. 11. The three affections most frequently found in the family history of epileptics are epilepsy, migraine and alcoholism. 12. Migraine appears to be very closely allied to epilepsy, both in the family history and symtomatically. 13. The differential diagnosis between Meniere's disease and epilepsy is occasionally difficult.

Treatment of Ankylostomiasis.—Castelloi, (Reve de medicine) states that the treatment of this condition two indications are to be met—the destruction of the parasite, and its ejection from the body of the patient. To satisfy the first many substances have been employed. Among them may be mentioned calomel, santonin, and chenopodium, all of which have been found unsatisfactory. Dolaria has been used with success in Brazil, but has found little favor elsewhere. Male fern, thymol, encalyptol, and essence of wintergreen are highly recommended by many authors Spanish writers have recently advocated the use of glycerine which has been found especially destructive to the larvae of the parasite The author experimented with three substances and presents an analysis of 50 cases. Of these cases five were treated with male fern, twenty-one waith encalytol and twenty-four with Beta naphtol. The results were moderately successful with the first, more successful with the second, and satisfactory with the third, which is the treatment recommended.

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Treatment of Eclampsia by Decapsulation of the Kidneys.—Gauss (Zent. f. Gyn.) finds

that in spite of the conservatism of German authors as to decapsulation of the kidneys there have been several successful cases reported there. Some patients have been saved by the operation who would undoubtedly have died without it. In such cases emptying of the uterus did not put a stop to the convulsions, and they did not cease until the kidney condition was relieved. That the numberless deaths from eclampsia may be lessened, we are justified in trying any method that is not so dangerous in itself as to increase the mortality. In seventy-five per cent. of all eclamptic cases delivery puts an end to the convulsions; in the other twenty-five per cent. life is sacrificed if no relief is obtained. The author reports two cases in the service of Kronig at Friberg, in which great aid was rendered by the operation. Of these he gives the detailed histories. Convulsions were severe, and continued after delivery. Decapsulation was done after convulsions had gone on for several hours after delivery. After the operation only two convulsions occurred in one case. The unconsciousness was lessened, pulse and temperature fell, the amount of urine increased, and the specific gravity became normal. Albumin and casts that had been present in large aomunts and numbers decreased, and recovery ensued. The question comes up whether decapsulation shall be combined with forced labor. In many cases early delivery is sufficient and the other operation is not needed; but in cases where no benefit follows delivery the other operation should be combined so as to give the patient a chance for her life which must otherwise soon be sacrificed to the uremia. It adds but a comparatively few minutes to the anesthesia necessary for the artificial labor.

Intra-Articular Injections at the Hip. Their Technique and Use in the Treatment of Hip Disease. Calot (Jour. de Med.) outlines the inaccessibility of the hip articulation to approach with an injecting needle, and describes the dangers attendent on such a procedure. After many experiments on the cadaver, and considerable practical experience, the author concludes that the point of election form making an injection into the hip-joint lies below the crural arch, outside the course of the femoral vessels. Here the head of the femur can be palpated. The rule is as follows: In a child, eight to fourteen years, the skin is pierced 2 cm. or 2 1-2 cm. outside the femoral artery, which can be felt pulsating. In an adult, 3 cm. Perhaps a better direction, applicable to all cases, is to pierce the skin half way up a vertical line, passing from the anterior superior spine of the ilium to course of the femoral vessels. The needly must not be pushed in directly from before backwards, but must be inclined upward, and from with out inward to an angle of about fifteen degrees. This allows the injection to enter the capsule of the joint upder the femoral head. The needle must have a short bevel, similar to the type used for spinal cocainization. It must be forced to a point where the bone is felt. Then the handle is forced transversely and downward, keeping the point in contact with the bone. The injection is put in with force, that the liquid may penetrate to the lower depths of the acetabulum. The needle is then withdrawn and a tampon is held very firmly over the orrifice for two or three minutes to prevent the liquid from escaping, and to favor the transmission of the fluid to all the recesses of the joint cavity. This is followed by a sterile compression bandage. The necessity of doing something more definite to prevent tuberculous disease from progressing is well established. All surgeons familiar with hip disease know that the great majority of cases have a shortening of three cm., more or less complicated by vicious position and an ankylosis more or less solid. Of course some cases make good recovery, and ultimately have no lameness; but in three-fourths of the cases there is shortening of three cm. and decided lameness. Futhermore, those cases that have abscess are usually under treatment over two years, and have more marked destruction and worse end results. The author claims remarkable results both in checking beginning disease and helping old bone destructions to quiet down without further progress, by the method of treatment he recommends. It is applicable to all joint tuberculosis, the knee, the elbow the shoulder, the ankle or the hip, and should be put into use whether the disease is well established or just beginning; in fact, as soon as a positive diagnosis is made. The fluid used is of two kinds. In acutely active and rather light forms of disease, the injection is made of the following ingredients:

Huile	50 gms.
Ether	25 gms.
Cresote	3 gms.
Iodoform	7 gms.

At each setting, 3 to 10 gms., according to

age, of this solution are injected through a No. 2 Colin needle, 8 cm. long, with a short bevel. In fungus forms of disease, the same quantity of the following is used:

Glycerine .....20 cms.
Napthol Camphre ... .. 3 gms.

This treatment should be put into effect every five or six days for two months, then the case should be allowed to rest for six months, meanwhile keeping up the ordinary orthopedic measures. The author concludes that treatment, such as repose, extension, immobilization, correction of faculty attitude, etc., results in the majority of cases in a shortening of 3 cm. and a permanent limp. This shortening is due to an erosion of the bone at the articulation by the tuberculous process. Mechanical treatment, no matter how well enforced, does not wholly prevent this erosion The only method of improving the present orthopedic treatment is to inject into the diseased joint area such substances as will tend to lessen the activity of the growth of the disease process.

The Use of Suprarenin in Obstetric Practice —Neu (Gynaek. Rundschau) in his introductory remarks, while speaking of the pharmakodynamic action of extracts of the suprarenal glands, mentions the very interesting fact, that quite recently Stolz in the "Hoechst Farbwerke" has succeeded in producing synthetically the active principle of this extract

The effect of suprarenal extracts upon the uterine musculature of late has been carefully studied by Kurdinowski and Kehrer. They both confirmed the older observation that under the influence of this substance the pregnant uterus contracts firmly. Kurdinowski believes, however, that this apparent contraction of the organ is only coincident to the resulting contraction of the uterine blood vessels, and thus denies any specific effect of suprarenal extract upon the uterine musculature. Such a specific action, on the other hand has apparently been proven by Kehrer. From certain experiments and observations the author of this paper felt justified in accepting Kehrer's views.

An abdominal Caesarian section offered him the welcome opportunity to study the question on the human being. After the pregnant uterus had been developed through the abdominal incision, one hypodermic syringeful of a one to ten thousand solution of suprarenin was injected into the uterine musculature in three different places. The uterus immediately contracted firmly, becoming paler in color. The organ could be extirpated practically without the loss of blod. The writer states emphatically that the contracting effect of the intramuscular application of the suprarenal extract in this case was very pronounced and most gratifying.

Regulin Treatment of Chronic Habitual Constipation.—Schmidt (Munch. Med. Wochenschr) uses regulin, a 20 per cent extract of eascara in agar. Helfenberg, in twenty-five patients, obtained good results in 80 per cent with this treatment. He gave one to two teaspoonfuls in potato soup, or with apples, once daily without any change in the diet. As early as the third day after this, there resulted an easy soft stool; no discomfortable symptoms were observed. The treatment was stopped after 14 days, or the amount was decreased. The action of regulin is largely mechanical. It takes 17 times its own volume of water and by this means produces a voluminous, soft stool.

Fatal Intraperitoneal Hemorrhage in Uterine Myomata.—Stein (Monatsschr. f. Geburtsh. u. Gynak) reports the following case:—P., aet. 39, was admitted to hospital in a collapsed state, with the history of abdominal pain. Her condition pointing to internal bleeding, she was at first treated by saline infusions and camphor injections. Although greatly collapsed, it was decided to open the abdomen, as a provisional diagnosis of ectopic gestation was made. There was found, however, much free blood in the abdomen, and two myomata, on one of which the veins were very much distended. The uterus was removed by supravaginal hysterectomy. The patient died forty hours after operation and at the postmortem a lacerated vein was discovered to be the cause of the haemorrhage. Only two similar cases have been reported.

An Easy Method of Overcoming the Habit of Smoking.—Kolomeitzer (Bulletin medical) states that if the mouth be rinsed with a solution of silver nitrate (one forth of one per cent. strength), it will overcome the desire for tobacco, because after this is done the smoke causes a gustatory sensation, which is most repugnant, and which removes, for a long time, all desire to smoke.

The Early Diagnosis of Carcinoma of the Stomach — Aldor (Weiner klin. Worchenschrift) does not attempt to give a general discussion of the methods of diagnosing carcinoma, but considers three laboratory methods which have been carefully tested by him. Salkowski's method of determining the presence of albumose in the urine is regarded as a great diagnostic help in these cases.

The author gives a modification of this method which he has worked out in the examination of a large number of such cases. In forty carcinoma cases 56 per cent. showed the presence of albumose. While the mere presence is not significant of carcinoma, nevertheless the writer regards the constant presence as of great significance.

Solomon's method of determining the presence of nitrogen in the carefully washed stomach is also regarded as valuable in recognizing the presence of an ulcer, not necessarily however of a maligant type. Lastly, occult hemorrhage is discussed and special emphasis is made on the necessity of placing these patients in the hospital, where a careful diet can be carried out for some days before any conclusions can be drawn from the positive findings Aldor emphasizes the fact that while these three methods in themselves are not of great diagnostic value, they may lead to a very early diagnosis when all three are present together with other symptoms.

Diagnosis of Certain Forms of Renal Disease.—Bradford believes that nephritis of the parenchymatous or diffuse tubal type is by no means uncommon in the first two years following syphilitic infection. It often comes on at a time when the patient feels perfectly well ,is not deeply modified by the underlying dyscrasia and hence is commonly referred to exposure to cold. Evamination may show a few spots suggestive of syphilis or even a gumma. This form of nephritis is characterized by very intense albuminuria, the urine frequently becoming solid, although the patient may not seem very sick. Consequently the disease comes to light unexpectedly. Albuminuria also is persistent, lasting several months but it may entirely clear up. Nephritis may also occur during the course of secondary syphilis and be of an intense type. Probably all cases of renal disease are ultimately due to toxic agents rather than directly to exposure to cold. Syphilis may supply the toxic factor. (British Medical Journal.)

Vegetable or Meat Diet in Hyperacidity.—Schloss (Archiv. f. Verdauungskrankheiten) says that it was formerly generally supposeda that albumins neutralized the acid in stomach, and that an albuminous diet was indicated in cases of separacidity, but in view of the expressions of Jurgensen and others, there has been material change in the popular views. He argues that while the albumin neutralized a portion of the acid, at the same time it stimulated the mucous membrane to an increased production of the same. This the author has attempted to demonstrate through a series of experiments upon animals in which he produced the Pawlow stomach and succeeded in doing so to his entire satisfaction. His object was to show that in the treatment of these cases success depended not so much upon the neutralization of the acid already produced, as the prevention of its further production. That diet is best which produces the least stimmation on the secretory apparatus. He found in these experiments that the vegetable diet called for less secretion for a shorter length of time than the meat diet. That meat alone stimulated the mucous membrane to a far greater production of acid and that a mixed diet produced an amount between that of the vegetable and the meat diet. He recommends in cases of hyperacidity a vegetable diet admixed with small amounts of albumin.

A Simple Method of Performing the Agglutination Reaction.—Gossner (Deutsch Medizinische Wochenschrift) describes a method for performing agglutination tests, particlarly that for typhoid fever, which has been simplified to such a degree as to make it easy to carry out under all circumstances and without any bacteriological training. Whole blood is used and is diluted with formalin salt solution by the addition of the necessary number of drops of diluting fluid to the drop of blood The bacteria used are in the form of a sterile formalin culture and are added to the blood dilutions in small test tubes. The essential part of the method consists in the fact that after the physician has made the necessary dilutions at the bedside he leaves instructions with the patient's attendant at the lapse of two hours and again at four hours to place a drop of the mixed blood and bacterial culture on ordinary miscropic slides that are labeled beforehand. These drops dry promptly and at the physician's next visit the slides are taken back to his office, fixed, and stained with

methylene blue. If agglutination has taken place it is readily discernible with the naked eye on holding the slide to the light, and if desired the result may be confirmed by the use of the microscope. The advantages of the method are the simplicity of the apparatus required, the fact that no dangerous material is used, and the slight degree of trouble it involves for the busy practitioner.

Basophile Granules in the Erythrocytes an Early Sign of Lead Poisoning.—Frey says that although chronic lead poisoning when once established is easily diagnosed, in its earlier stages it is not. The first symptom is simple anaemia. The blueline on the gums is not conclusive evidence of lead poisoning and is present in practically every worker in zinc Nor can the presence of lead in the urine be relied on as it occurs only in a small percentage of all cases of lead poisoning and may be absent even in marked cases. Early recognition is only possible by a microscopic examination of the blood. The red corpuscles normally are homogeneous and stain only with acid dyes. But in lead poisoning fine basophile granules appear in them. These are never found in health, simple chlorosis, pulmonary tubersulosis, syphilic—even during mercurial treatment—chronic nephritis, or poisoning by other drugs than lead. The appearance of numerous granular, basophile erythrocytes is not only constant but is the earliest symptom of lead poisoning. They may also—but not constantly—occur in cancer, pernicious anaemia, intestinal putrefaction, septicaemia and malaria. But as these conditions can usually be easily detected, this fact does not materially detract from the importance of granular erythrocytes in the diagnosis of lead poisoning. The number of granular cells is proportionate to the severity of the case and diminishes, and finally reaches zero, when the workmen are no longer exposed to the action of lead and are suitably treated. The granular red cells probably disintegrate later. Hence arises the anaemia of lead poisoning.

The writer found these basophile granules in every one of 22 zinc workers who had other symptoms of lead poisoning, such as neuralgia arthralgia, anaemia, colic, and paralysis. Among 16 zinc workers who were in hospital for causes other than obvious lead poisoning they were found in only one. This man was anaemic and had muscular rheumatism, which was thus diagnosed to be form of lead neuralgia. Among 26 apparently healthy zinc workers, basophile granules in the erythrocytes were found in five. hese men were somewhat anaemic and were evidently in the first stage of lead poisoning. If the granules are found the men should withdraw from the influence of lead until they have disappeared.

Smear preparations of blood are made, dried in air, fixed in absolute alcohol, and stained in Loffler's methylene blue (which contains caustic potash) for one-half to one minute They require washing in distilled water until the bluish cover-slip has a greenish tint. All basophile elements are stained blue and contrast with the greenish appearance of the red corpuscles.

The Naso-Pharynx as Infection Carrier in Epidemic Cerebro-Spinal Meningitis.—Fraser and Comrie (Scttish Med. and Surg. Journ.) after bacteriological examination of the nasopharynges of 69 fathers, the children of 15 of these having suffered from epidemic cerebrospinal meningitis, during the recent epidemic in Leith, drew the following conclusions: (1) That hot, dusty, ill-ventilated atmospheres provide conditions favorable to the growth of the meningococcus and are often associated with the dissemination of epidemic cerebrospinal meningitis. (2) That the high percentage of fathers whose naso-pharynx they found to contain the meningococcus, points to the fact that they are the carriers of the diease to their children. (3) That the chief incidence of the disease in the Leith epidemic was among children of the lower classes, and that this is in favor of a naso-pharyngeal infection (4) That infection of the nasopharynx is an important factor in spreading the disease. (5) That it is advisable to isolate all contacts and to carry out a bacteriological examination of the nose and naso-pharynx. If the meningococcus be present these centers should be disinfected and contacts should only be allowed to leave quarantine after the naso-pharynx has been reported free from the meningococcus on two consecutive occasions.

Treatment of Burns.—Sutcliffe, Brit. Med. Jour., divides the different dressings used in the treatment of burns and scalds into three classes: 1. Powders. Boric acid and zinc oxide are sometimes useful in quite superficial burns, but are quite unsuited for deeper burns as they form scabs under which septic material collects. 2. Oils. The oil most in use is

Carron oil—a mixture of lime water and linseed oil. But it and all other oily dressings have the following disadvantage: a. Oil is not sterile and has no antiseptic properties b. An oily dressing will not absorb any of the discharges, which are free and must be kept so under pain of setting up severe constitutional symptoms. c. The oily dressing must be changed every twenty-four hours. d Oil makes a dirty dressing, soiling everything with which it comes in contact, and giving off a sickly offensive smell. e. The parts once bathed in oil, it is almost impossible to clean them. f. The space occupied by the stock of oil is considerable. g. Oil has no heating properties per se, and sooner or later must be changed. 3. Lotions. These are the most rational form of dressing for the following reasones: a. The water can be sterilized, and the lotions being antiseptic, organisms will not grow on the dressings. b. The inevitable discharges are absorbed and sterlized by the dressing. c. Such dressings may be left in situ for at least forty-eight hours. d. Lotions are easily removed from the parts. f. The space occupied by the drug from which the lotion is made, is insignificant. g. Lotions have healing properties per se. The lotions in most common use are bichloride of mercury boric acid, and picric acid. The first must be used so diluted, in order to prevent absorption that its antiseptic properties are greatly impaired. Boric acid is a useful drug, but has no anaesthie effect. Picric acid fulfills all the advantages of lotions—it is sterile and antiseptic; the discharges are absorved; it may be left for forty-eight hours; it occupies small space; and it is stimplating to the new tissues A five per cent. solution is the strength required, so that one ounce of the salt makes over ten pints of lotion. It must be borne in mind that the dry crystals are explosive. In severe scalds due to superheated steam, where the tissues are instaneously killed, a lotion of bichloride of mercury is most suitable, as the parts must be kept as aseptic as possible, and there is no danger of the dead tissues absorbing the drug and thus causing poisoning Should the patients recover sufficiently from shock, early amputaion is the only rational treatment.

Prevention of Typhoid Fever.—Davis (Brit. Med. Jour., sums up the question of the prevention of typhoid fever as follows: First, as regards the typhoid patient himself. Here the preventive and protective measures should consist of: 1. Segregation from patients suffering from other diseases. 2. Provision of special clothing and bedding, distinctively marked and kept separate. 3. Special feeding cups, food utensils, bed pans, urinals, spit cups, clinical thermometers, and enema apparatus all distinctively marked. 4. Specially detailed nursing attendants, who should be fed and housed apart from the general nursing staff. though they need not be absolutely isolated But they should wash and change their clothes before mingling with the other nurses. 5 Strict disinfection of all excreta of the patients, also of sputa, bath water, and ablution water. 6. Disinfection of all utensils, whether used for food or excreta. 7. Destruction by fire of all food remnants. 8. Everything that enters the typhoid ward should be considered infective, and should be treated accordingly. 9. Disinfection of the patient's hospital bedding and clothing, special care being taken in the conveyance of clothing from the ward to the place of disinfection. Covered receptacles should be used and the infected clothing kept moist. On recovery the typhoid convalescent is still to be regarded as infective Urotropine should be used, and the urine periodically examined for typhoid bacilli. These appear in the urine about the end of the second week, and continue to be discharged for weks or even months. Secondly, in the case of men suffering but slightly or not at all, not reporting themselves sick, and yet possibly capable of spreading infection, the correct procedure would be: 1. The recognition of the possibility or probability of such mild but dangerous cases being present in any body of troops. 2. The institution of a systematic inspection of all new arrivals for the purpose of detecting such mild cases of typhoid fever. 3. The prevision of a quarantine or segrgation camp where such new arrivals may be accommodated until a positive or negative diagnosis has been made.

Peritonitis.—Berry, Lancet, states that the term peritonitis is a misleading one, in that it is not the mere inflammation of the peritonaeum that is dangerous. This inflammation is in itself often exceedingly beneficial and protective. But peritontitis is dangerous in proportion as it is associated with absorption from the peritoneal cavity. It is the absorption of toxines from the peritoneal cavity, not the inflammation of the peritonaeum that is

dangerous. The pertioneal cavity is a vest lymphatic space from which absorption of toxines readily takes place. In the great majority of cases of peritonitis the causative bacteria are introduced into the perioneal cavity from within by passing through the wall of one of the hollow abdominal viscera—the appendix, the intestine, stomach, gallbladder, Fallopian tube, etc. Not uncommonly the poisonous contents of the viscera are introduced through a visible opening in the wall of the viscus—so called perforative peritonitis. In appendicitis the amount of septic material escaping into the peritoneal cavity is usually quite small—perhaps only a drop or two—as the perforation of the appendix is usualy preceded by adhesive inflammation of its lumen, shutting off its cavity from that of the caecum, so that escapes is what is in the appendix at the time of perforation. In cases of fulminating appendicitis there is either a previous distention of the appendix with foul septic fluid, or the sudden rupture of an abscess that has slowly and quietly formed outside of the appendix and which ruptures secondarily. But where a large hollow viscus like the stomach or caecum is perforated, there is rarely any preceeding adhesive inflammation, the perforation occurs suddenly, and is immediately followed by the pouring out into the peritoneal cavity of a vast quatity of septic material. There is usually a sharp, severe pain, limited at first to the site of perforation. The peritonaeum is normally insensitive to mechanical injury, but is very sensitive to the application of irritant poisons such as septic material. Sudden, severe, and persistent pain, accompanied by tenderness and rigidity of the abdominal muscles, is often sufficient for the diagnosis of perforation of the stomach. Nausea and vomiting usually follow soon afterwards, but it is not necessary or desirable to wait for the later symptoms of elevation of the temperature and increased frequency of the pulse, as these latter indicate septic absorption which it is desirable to forestall. Elevation of the pulse is much more important than a rise of temperature. As regards the effusion of serious fluid into the peritoneal cavity, while blood serum is bactericidal yet the bactericidal fluid. The particu- diminishes in the immediate neighborhood of on infected area. Consequently its letting out by operation leads to the offusion of fresh more strongly bactericidal fluid. The particular bacillus most often causing peritonitis is the colon bacillus. Of late undue stress has been laid upon the quality of the bacteria and too little upon the quantity of the poison. The severity of the attack depends chiefly upon the latter quality. Operation in cases of peritonitis does two things only: a. By closing a perforation or removing a septic focus, the further entrance of poison into the peritonaeum is prevented. b. To a limited extent the poison already within the peritoneal cavity is removed. But operation cannot remove from the blood the poisons, bacteria, or toxines already there. This must be done by encouraging the excretory powers of the kidneys and other organs by the administration of fluid. For purposes of treatment the writer divides all cases of peritonitis into four classes: 1. Those in which there is no perforation of any viscus and no collection of fluid in the peritoneal cavity. The amount of poison here is very small, and the best form of treatment is free purgation by salines and the administration of large quantities of fluid either by the mouth, the rectum, or into the subcutaneous tissue or a vein. Opium should be avoided. It may be desirable to drain the peritoneal cavity if there is any evidence of the accumulation of free fluid. 2. Those in which there is a recent perforation of a hollow viscus. Here an immediate operation should be performed with the object of closing the perforation and preventing further extravasion into the peritoneal cavity. The sooner the operation the better. Here it is prevention rather than cure of peritonitis that is aimed at. The less that is done to the peritonaeum by washing or sponging the better, free drainage being the best means of getting rid of the extravasated septic material. Purgatives should be avoided and nothing given by the mouth, with the exception of water. 3. The great majority of cases of appendicitis. Most of these will improve and pass into a more favorable condition for subsequent operation, if not interfered with by operation at the very beginning. Purgatives or large enemata should never be given, nor any food or fluid by the mouth. The patient can very well do without food for a day or two. The thorax should be considerably higher than the pelvis, in order that any fluid may gravitate to the latter position where it is more easily dealt with. 4. Cases of general diffuse peritonitis with general distention of the whole abdomen and purulent fluid diffused over a large portion of the abdomen. The writer thinks the Ochsner method of treat-

ment the best—i. e., immediate and radical intervention, freely opening the abdominal cavity, breaking up all adhesions, opening all pockets and thoroughly irrigating the entire peritonaeum. For the very worst class of cases, the Murphy method is undoubtedly good; this consists in making a small opening in the abdomen, closing the perforation or removing the appendix, the introduction of a large drainage tube into the pelvis, placing the patient in a sitting posture of from 35 to 45 degress, and the administration of a quart or two of saline every two hours by rectum. The

Syphilitic Metrorrhagia.—Muratow, Zeut f Gyn) describes two cases of obstinate uterine bleeding which resisted all treatment until mercury was administered, when they recovered. The author believes that syphilitic conditions of the uterus are more frequent than is generally believed. There is very little available literature on this subject, and no autopsies on such cases have been recorded. In all probability the condition of the uterus is similar to that found in syphilitic affections of the stomach in which hemorrhage occurs Here the mucous membrane is affected, and especially the bloodvessels, and erosious and ulcerations of the surface occur with erosions of bloodvessels that perform and allow o hemorrhage. There are no specific symptoms of such metrorrhagia, ther being on cachexia and the uterus being an organ from which bleeding is easily tolerated. Such bleeding ha been observed in young maidens the subjects of inherited syphilis, and the puerperal state in women who suffered from syphilis. Hemophilia has even been suspected, so profuse and persistent was the bleding. Cystic ovaritis has resulted in some cases. In all cases of obstinate bleeding from the uterus without clear etiological elements it is desirable to inquire carefully for a syhilitic history in the patient, her husband, or her parents, and make use of syphilitic treatment before giving up the treatment of the case to operative procedure Most of these patients have gone the rounds of specialists and had all sorts of treatmen without any benefit, but are promptly relieved by mercury and iodides.

Results of Extirpation of Goitre.—Chalei (Lyon medical) reports the case of a woman forty-three years of age, who had ben suffering with goitre for twelve years. She also had the usual nervous symptoms, fine trembling o the fingers, eyelids, and the tongue, insomnia, and constant tachycardia (pulse, 140 per minute). The eyes, however, were not prominent, there was no nystagmus, no contraction of the visual field, no inequality of the pupils. There was only slight deficiency of synergy in the movement of the lids and of the globe, and a little difficulty in convergence. Patient demanded treatment for the tachycardia, as it was accompanied by insomnia and other evidence of nervous excitement. The growth was almost in the median line and about the size of an orange. There were no signs of compression of the larynx. An incision in the middle line, under local aneasthesia of the skin revealed the growth, which was readily peeled from its capsule. It was found to be an adenoma. The wound healed promptly. The point of interest is that ther was an almost immediate cessation of Basedow's symptoms, after simple ablation of the goitre. The palpitations ceased, and the pulse rate came down to 100, the trembling disappeared, and the nervousness and insomnia gave no more trouble. The author remarks that both on clinical and therapeutical grounds we should separate cases of exophthalmic goitre from those of goitre without exophthalmos. The former are much more grave in character, and are never benefitted by surgical means, whereas the latter are either improved or cured by a simple operation for the removal of the affected thyreoid body.

Extract of the Posterior Lobe of the Hypophysis as a Cardiac Tonic in Heart and Kidney Diseases. — Trerotoli (Rivista critica delle clinicle medica), as the result of an experimental investigation made with the extract of the posterior lobe of the hypophysis, both in organic and functional heart disorders, and in kidney affections, declares that this extract, given hypodermically is a powerful cardiac stimulant. The extract was obtained from the posterior lobe of the hypophysis of an ox, in the following way: The lobe was isolated and crushed in a small mortar, and triturated with about three c.c. of normal salt solution, and then filtered. Each day, for three successive days, this filterate was sterlized by boiling for ten minutes. In the clinical observations of the author, he injected hyodermically from one to four cubic centimetres. This was always followed by a strengthening of the pulse which sometimes; diminished its frequency and this occurred equally in the cardiopath ies and the nephritics; but it was observed particularly in casses with valvular lesions

and hypertrophy of the left ventricle. The strengthening of the cardiac action was often accompanied by a disappearance of the arrhythmia. As regards the arterial pressure, it became slightly lower immediately after the injection, and increased later. These effects attained their maximum in fifteen or twenty minutes after the injection, and persisted for at least one hour. No unpleasant or unfavorable secondary effects were observed. The injections can be repeated two or three times a day without inconvenience.

writer is opposed to indiscriminate immediate operation in appendicitis, and thinks that the method of treatment of twenty-five years ago gave a lower mortality.

Cerebrospinal Meningitis.—Wright, Lancet tells us that cerebrospinal meningitis was first recognized as a distinct disease in 1805 by Viensseaux. The epidemics are marked by irregularity of distribution and peculiar commencement and cessation. No well defined channels of spread can be made out. Epidemics are generally localized and their duration variable. There is no racial disposition and the sexes are equally affected. About seventy-one per cent of the cases are under fifteen years of age and only three per cent. over forty. Some epidemics have confined themselves to adults of middle age. The disease is certainly more common under one year of age than is generally supposed. A second attack is extremely rare, but relapses may occur after the patient has apparently completely recovered. The microorganism can thus remain latent in the cerebrospinal fluid. Communicability appears to be very little. No definite statement can at present be made as regards the channels of infection. Most epidemics occur during the winter and spring, but heat, cold, and moisture have but little effect in influencing the disease Hygenic conditions, soil, and situation are of little importance. The writer advances the following theory: Is the meningococcus a constant or occasional habitant of the bowel of man, horse, or other animal, assuming pathological properties under certain conditions and especially so in abnormal situations such as the meninges. No predisposing disease or conditions are known. The incubation period is very difficult to determine—it may be between one and ten days. Much importance has been attached to Kernig's sign, but it is present in all forms of spinal meningitis. Deafness is the most common of the sequelae, and is not usually accompanied by otorrhoea Permanent squint and other eye effections sometimes occur. Of the anomalous forms of the disease, the ambulent type is the most important, but it is very rare. Abortive and intermittent types are also met with. The chronic type may last for months, the patient being emaciated to skin and bone. The prognosis is uncertain and should always be guarded. It is exceedingly grave when the onset is sudden and severe, without prodromal symptoms. The mortality varies in different epidemics from twenty to seventy-five per cent No specific has as yet been found for the disease. Symptomatic treatment, such as ice caps, cupping, frequent bathing, etc., is all that can be done. Morphine in large doses is sometimes beneficial, if given early. The principal disease to be distinguished from cerebrospinal meningitis is pneumonia. In the former the pulse respiration ratio is unaffected and the respiration is seldom labored as in pneumonia. A diagnosis from influenza is sometimes very difficult; pain in the joints is very uncommon in cerebrospinal meningitis. The writer depreciates the use of the term "simple" or "idiopathis" meningitis. Many cases diagnosticated as septic, suppurative, and tuberculous meningitis, and as posterior basal meningitis are unodubtedly due to the meningococcus.

Pentosuria and Diabetes.—Bial lays stress upon the importance attaching to the recognition of pentosuria, and he supplies a simple method of differentiating it from diabetes mellitus. The diagnosis of the latter disease in practice rests essentially on the examination of the urine and the results given by Fehling's or Nylander's test. In cases of uncertainty recourse is had to the phenylhydrazin test, and if the typical yellow crystals are obtained, then no doubt remains in the mind of the physician that glucose is present. Unfortunately however, research has shown that these tests are unreliable; even the phenylhydrazin test may be given by urine that contains no grape-sugar whatever. For all of them give a positive reaction in the presence of pentoses. Grape-spgar is a hexose containing six carbon atoms in the molecule, while the pentoses, containing only five carbon atoms, closely resemble grape-sugar in structure and properties. Clinically, the difference is of extreme importance.

Chronic pentosuria is a not uncommon con-

dition, which is not affected by dieting. But it is in no way dangerous or even serious. It presents absolutely no other symptoms, and as a rule its existence is only discovered when the urine is examined for some other condition. Such examinations suggest diabetes and, unless it is established that a case of pentosuria is being dealt with, a wrong diagnosis as diabetes mellitus may easily be made, with the most serious consequences to the patient in anxiety, expensive treatment, difficulties in life insurance, etc.

A diabetic urine can be distinguished from pentosuria by the polarimeter, or, again, by the fermentation test, for the pentoses are not split up by yeast. But these tests are not very readily, and certainly not usually, carried out in general practice. There is, however, an easy and, so far as is yet known, quite reliable method of detecting the presence of pentoses in the urine. This is a modification by the writer of the orcin reaction introduced some years ago by Salkowski. The original method involved a somewhat lengthy procedure quite unsuited to practice, but the use of Bial's reagent is simplicity itself; 4 cubic centimeters of the fluid is heated to boiling point in a test-tube, then withdrawn from the flame, and a few drops of the urine to be examined are added. If pentoses are present in quantity sufficient to reduce Fehling's solution, a beautiful green color develops in the fluid within a few seconds, and this reaction is absolutely characterisite. Further, the diagnosis of pentosuria by this means excludes diabetes mellitus, since the two conditions have not been found together.

The writer quotes a number of authors who vouch for the reliability of the test. The reagent consists of 0.5 gram orcin dissolved in 500 cubic centermeters of 30 per cent hydrochloric acid, to the solution being added 20 drops of lipuor ferri sesquichlorati. It remains active for at least a year. The source of pentoses occurring in quantity in the urine is not yet definitely established. The author believes that they are not derived from the food, and that there is no renal lesion associated with pentosuria. So far as the evidence goes, it would seem that they are derived from the central nervous system, in which they occur normally. (Berliner Klinik.)

Leucocytosis After the Use of Digitoxine.—Cappuccio has studied the effect of the new preparation of amohphous digitoxine(digalen) with reference to the increase in leucocytes in the blood of patients to whom the remedy was administered hypodermically. He also compared the results with the effect of the internal use of the ordinary infusion of digitalis leaves. From a study of twelve cases he concludes that there is a marked leucocytosis after the use of digalen. It should be noted that the vehicle in which the digitoxine is dissolved in this preparation is a 25-per-cent. solution of glycerine and water. It may be that this solution in itself may produce leucocytosis when injected hypodermically. To make sure, a 25-per-cent. solution of glycerine was injected into the same patients without, however, producing any leucocytosis. The increase in leucocytes regularly occurred from seven to eight hours after the injection of digalen, and the number reached within twenty-four hours double the original number of leucocytes counted. This occurs both in patients with heart disease and with pneumonia. The leucocytosis recurs every time a dose of digalen is administered. Other authors found leucocytosis after injecting an infusion of digitalis into animals. Very probably the action of digalen upon the blood is due to the direct effect of digitoxine, which seems to attract the production of leucocytes in the bone-marrow. Inasmuch as the remedy in question regulates the heart and increases the functional efficiency of the kidneys, its property of producing leucocytosis is a valuable addition to its qualities as a remedy in pneumonia. (Riforma Medica.)

Action of Hot and Cold Water Bandages in Inflammation.—Schade refers to the fact that the osmotic pressure of the fluid in which they are laved has a great influence on the size of the cells. When the osmotic pressure is high the cells of the region swell and pain results; the cells are injured and inflammation follows. The application of hot or cold water bandages to induce "reactive hyperaemia," among other things affects the condition of the osmotic pressure, increasing the centrifugal movement of the lymph and with it sweeping the products of inflammation toward the periphery, where they are liable to be taken up by the blood or otherwise rendered innocous. Superficial oedema with deep-seated inflammation should be regarded as an indication for inducing this reactive hyperaemia, and this indication can be met by applying a Priessnitz bandage. It is also indicated when the oedema is

still latent, as the effect is far-reaching. (Munchener medizinische Wochenschift.)

Headache and Neauralgia of Nasal Origin.—Hartmann has frequently found that patients suffering from recurring headache or from neurasthenia are relieved of the trouble by removal of some obstruction in the nose or sinuses or by the treatment of a sinusitis. In one of his cases trigeminal neuralgia had persisted for weeks, the pain being so intense that sleep had been impossible. The most diverse treatment had given no relief. All pain vanished immediately after the maxillary sinus was exacuated, removing cheesy matter with which it had been filled. In other cases supra orbital neuralgia, which recurred every day at a certain hour, was the result of inflammation in the frontal sinus and was cured by appropriate treatment. He has witnessed the prompt vanishing of the severest frontal neuraligia after application of the Politzer method. The pain may be due to the inflammation itself or to compression from secretions, or merely to rarefaction of the air in the sinus. Even the severe frontal headache of influenza can be immeasurably improved by a single application of the Politzer method of inflation The pains subside entirely or temporarily. Repeating the application the next day soon completes the cure The effect is similar to that derived from the air douche in middle ear affections. In another case described, chronic neuralgia had persisted for over a year, with intense pains in the right side of the head. The use of the air douche soon banished the pain entirely. The trouble was not due to an inflammatory process in this and similar cases, but merely to occlusion of the sinus, shutting off communication with the air. The writer's experience has demonstrated that this is a comparatively frequent occurrence and is liable to cause distressing pain. Opening a communication into the nose banishes the pain at once. Some of his patients return to him often for relief, as every "cold" causes the communication into the sinus to become stopped up. The passage of a thick sound through the nose into the sinus frees the patient at once from all pain. He has found in other cases that headache may be caused by morbid conditions in the muscles at the back of the neck, which can be corrected by faradization. Removal of adenoid vegetations, deviations and thickening of the nasal septum swelling of the nasal mucosa, or correction of other anomalies in the nose, should always be tried in cases of persisting headache and nea rasthenic symptoms. The obstruction in the nose amy be the sole or the principal factor in the trouble. (Deutsche medizinische Wochenschrift.)

Signs and Symptoms of Mucous Colitis.—Wilson says that mucous colitis in its varied forms, and cases whose symptoms are directly traceable to absorption of toxic products from the intestine, are comonly met with. Abdominal symptoms are not always by any means marked, and it is a mistake to imagine that a patient suffering from the disease must pass mucus in very obvious quantity. Errors of diagnosis may readily occur if cases are looked at in the light of their secondary symptoms only. The thorough examination of the colon should be made as much of a routine as is that of the stomach, heart, or other important organ.

The use of balneotherapeutical measures for the treatment of this disease is attended with excellent results, often after the usual mehods have met with little or no success. Special baths for the treatment of mucous colitis are now greatly in favor. The baths consist of two parts, which may be given together or separately as the medical attendant may direct. (a) The intestinal douche is administered while the patient lies on a special couch. A rubber tube, the length varying from fourteen to seventeen inches, according to prescription, is passed into the bowel by an experienced attendant, and the prescribed amount of hot mineral water allowed gently to flow from a jacketed cylinder, the pressure being graduated according to directions. The patient's position is altered during the time the douche is retained, the bowel emptied, and the process repeated. (b) The Tivoli douche. This consists of an ordinary reclining bath, in which the patient lies covered except for the head and neck, with warm mineral water. While lyoing in this way a hot wave douche is played on the abdomen from a special apparatus, and is usually prescribed at a much higher temperature than that of the bath. These methods are carried out in conjunction with special dieting, massage, and the drinking of mineral waters. (Edinburg Medical Journal.)

Heat Formations in Fever.—Aroushon reviews the various theories that have ben sug-

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Ch

gested in regard to the source of he surplus heat occuring in fever and the manner in which it is liberated, and details the results of experiments he has carried out since he and Sachs, twenty-two years ago, discovered the heat-center in the corpus striatum. He does not agree with those who believe that the liver, brain, blood, and pancreas are sources of the excessive heat, but is of the opinion that the muscles are the site of its liberation. The theory that the muscles, through increased contraction of their fibrils, generate the heat of fever is also discredited, and the author describes experients which bear out his contention that the abnormal heat-formation in fever is the result of the action of proteolytic ferments on the cells of the muscle bundles. His theory of heat generation in fever is as follows: Impulses originating in the heat-center are transferred through caloric or trophic nerves to the muscles; the muscle-plasma sets free proteolytic ferments in abnormal amounts, and these transform the vital force of the cell-contents into heat. (Berliner klinische Wochenschrift.)

Gonorrheal Pyelitis.—Sellei and Unterberg, Berliner klinische Worchenschrift, state that it is a matter of the greatest difficulty to determine whether or not a pyelitis can be produced by the gonococcus alone. The requisite information can be obtained only by ureteral catheterization, but there is always a possible source of error through the contamination that is likely to occur during the passage of the instrument through the urethra and bladder. By taking especial precautions in observations on five patients the authors reached the conclusion that the gonococcus alone is sufficient to produce pyelitis, although in most cases mixed infections are present. The process appears to be the result of direct ascension and not of hematogenous transmission. The affection is usually unilaterial and the symptomatology is not characteristic, so that the diagnosis can be made with certainty only with the ureteral catheter. The temperature is considerably elevated only during the most acute stages; later on there are only slight intermittent elevations. In some cases fever and pain are entirely absent. The polyuria and pyuria appear to be constant, however, but these symptoms are also common to other forms of pyelitis. In most cases the process may be cured by rest and internal medication. Where these measures are ineffectual lavage of the renal pelvis is indicated. For this purpose boracic acid solution and 1 per cent silver nitrate solution may be used.

The Gastric Disorders Accompanying Chronic Lead Poisoning.—Walko, Munchener medizinche Wochenschrift, has studied the gastric manifestations present in forty-three cases of lead poisoning of various degrees of intensity and chonicity. In most cases the symptoms of intoxication had persisted only for a few weeks and were severe. As a result of his observations he concludes that even in the early stages of chronic plumbism functional disturbances of the stomach appear which may be characterized by a diminution or entire absence of hydrochloric acid and ferment secretion. At first there may be increased motor activity, which is later followed by a diminution in motility. The course of these gastric affections is functional in nature and more rarely are due to actual parenchymatous changes in the mucous membrane. They may be induced through the constipation accompanying the chronic intoxication or through the involvement of the gastrointestinal nerve plexuses. The prognosis is usually favorable even in cases of marked severity, though there is always the possibility that later on other evilences of intoxication, such as encephalitis may appear.

Miscellaneous.

Physiological chemists have studied Cereus Grandiflorus and perhaps the most trustworthy in recent years, is an impartial study made by Prof. L. E. Sayre. He is neither enthusiastic for, nor prejudiced against, the drug. In his article, Prof. Sayre says that, when applied to the exposed heart of a frog, there was no perceptible reaction. However, when a subcutaneous injection into the dorsal lymph space had been made, an action seemed to be apparent. "There was seemingly an increased action in the amplitude of the heart, and an indication of a strengthened heart-beat or increased force."

All believers in Cereus Grandiflorus know its limited field, and the most enthusiastic among them will admit that its action is most apparent after prolonged use. That it is certain in its action and that it merits a place in the list of cardiac remedies is no longer a matter of doubt. In fact, the objections raised against its introduction into the United States Pharmacopoeia are not

serious. In this connection, Prof. Sayre says: "As to the question whether the drug should be made official in the United States Pharmacopoeia, there are several reasons why this should be answered in the negative. Among the objections are the uncertainty as to supply, the difficulty of identifying material, and the fact that the fresh material deteriorates very rapidly. The fresh turgid stems soon soften, and the mucilaginous material decomposes. Even partially dried stems are quite unstable. If the fresh, reliable cactus were easily obtainable, a tincture from it could not be prepared, of the proper strength, using the general official formula for tincture of fresh herbs. The proportion of cactus to that of alcohol would have to be much greater than 50 per cent." In the beginning the manufacturers of cactus had much trouble in the collection of material, but at the present time this objection does not prevail. Every ounce of cactus employed by them comes by express from the mountains of Mexico. It is in the process of manufacture three days after cut. And the drug is in perfect conpition four or five days. Most of the collectors are now reliable, and the material they now ship seldom contains more than ten per cent of other species which must be rejected.

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For nervousness, sleeplessness and sexual excitement characterized by erections or even chordee, various authorities vary in their recommendations. Ringer recommends the use of aconite and camphor. Bartholow and Phillips both advise the administration of lupulin. The value of Hyoscyamus has been appreciated by many medical men for a long time, and is quite valuable. Bromidia is to be highly recommended, since it consists of chloral, bromide, hyoscyamus and cannabis indica, and acts as a somnifacient, spinal sedative and hypnotic. The dose is a drachm to two drachms an hour before bed time.—American Journal Dermatology.

The Value of Codeine.

The Cleveland Medical Journal quoting from the Denver Medical Times, concerning codeine, states, that' according to Butler, "it is less depressing and more stimulating than morphine, does not constipate, cause headache or nausea, and rarely leads to the formation of a habit. Codeine seems to exert a special, selective, sedative power over the pneumogastric nerve, hence its value in irritative laryngeal, pharyngeal and phthisical coughs with scanty secretion. Like morphine, it has proved of value in checking the progress of saccharine diabetes, and it has been used for long periods, without the formation of the drug habit, inasmuch as when glycosuria was brought to a termination by dietary and other measures, the cessation of the use of codeine was not followed by any special distress. The effects of the use of codeine on the alimentary canal are remarkable, in that it asscages pain as well or better than morphine and nevertheless does not check the secretions or peristalsis notably, unless the latter is excessive, as in dysentery." In view of these facts it would seem that Antikamnia & Codeine Tablets are a remedy which should find a wide field. Prof. Schwarze (Therapeutische Monatshefte) in writing upon the treatment of the different forms of dysmenorrhoea, and the different forms of congenital deformity of the uterus, states that the coal-tar analgesics are of much use, as well as the preparations of iron and sodium salicylate. In many cases it is necessary to administer codeine in small doses, and the tablets of "Antikamnia & Codeine" would seem to have been especially prepared in their proportions, for just these indications.

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Treatment of Uterovaginal Catarrh.

By C. E. Brandenburg, M. D., N. Y. City.

Fifteen months ago Mrs. X. came to me for treatment; giving the following history: Six years previous she had a miscarriage, since which she had been troubled with a profuse leukorrhea of a very foul odor. At her menstrual period she suffered greatly and flowed excessively. On examination the cervix was found to be nearly four times its normal size and so badly eroded as to have every appearance of a cancer and had been mistaken for such by one physician. The uterus was soft and boggy and very much enlarged. She had been to the hospital on two occasions and each time had been curetted, but this seemed only to aggravate the general condition. For over a year I treated her with every means at hand, but to no purpose. I was making preparations for an operation, which would have meant the removal of the uterus, when my attention was drawn to Glyco-Thymoline and I determined to give it a thorough trial before operative measures were to be further introduced. An intrauterine douche of Glyco-Thymoline in 25 per cent hot soltion was administered and lamb's wool tampons saturated with Glyco-Thymoline pure were used. She began to improve from the first application. The leukorrhea became less and the odor disappeared entirely. The cervix took on a healthy look. The uterus decreased in size and became firm; in fact she is now nearly well after nine weeks' treatment with Glyco-Thymoline.

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THE DR. PETTEY RETREATS

Limited to the Treatment of

ALCOHOL and DRUG ADDICTIONS

958 S. 4TH ST. (Davie Ave.) MEMPHIS, TENN. 3303 PACIFIC AVE., ATLANTIC CITY, N. J,
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These Institutions are owned and controlled by reputable physicians, and are conducted upon strictly ethical lines. They were opened and are maintained solely for the purpose of treating Alcohol and Narcotic Drug Addictions by methods based upon the original investigations of Dr. Geo. F. Pettey of Memphis, Tenn., and first published to the profession by him in 1901. (See Therapeutic Gazette, Oct., 1901.)

The method of treatment introduced by Dr. Pettey removes these addictions from the list of almost incurable diseases and renders them the most certainly and readily curable of all the chronic ailments.

For Terms, Address the Retreat Most Convenient to You.

What Constitutes a Practical Medical Paper?

Comment is freely made on the character of articles appearing in medical journals. They are chiefly criticized as deficient in practical qualities; in failing to furnish definite information leading to the solution of clinical problems. This is true not only of those general in character, but also when written by, or for those interested in specialties. Authors naturally, and perhaps properly, aim to achieve originality, to offer novelties in technic, in treatment, or to put forth the results of patient research. All this is as it should be, and the contribution to science thus recorded becomes a credit to the diligence and capacities of a most laborious group of observers.

There is an impression broadly prevalent, erroneous in my judgment, that it is not worth while for active practitioners, untrained in literary, laboratory or hospital methods, to publish their experiences. When this is done, succinctly and clearly, especially when well systematized and grouped, there is thus furnished excellent data from which others may deduce generalizations leading to the establishment of truths.

There will never be a time when we can afford to ignore, when indeed we shall fail to profit largely by, what Sajous has so emphatically stated to be valuable scientific experimentation in the use of drugs. This experimentation is not that of a reprehensible sort, as may well be asserted of some kinds performed in the laboratory. It is the inevitable, the praiseworthy, attempt to test in mass the recommendations of those who have carefully formulated and made deductions from appropriate data.

It is essential that we put to concrete proof rational deductions, and upon the human being. Medical men are entirely willing to subject themselves to similar tests, as daily history shows. In many instances serious damage or death has thus resulted to themselves, sacrificing valuable lives. Not so when our patients are thus utilized; they are never tested so radically. If the vast army of intelligent, will-informed, careful practitioners with which America is furnished, yet who remain silent as to print, would keep accurate notes of their findings by placing them on record, they would aid greatly in elevating the position of medical science.

These men have the courage of their convictions. They use their best judgment. They are prepared to stand or fall in reputation upon their daily acts. Why should this not go toward adding to the sum total of knowledge? The aggregate presentation of so definite a subject as the observed effects of a powerful drug, or some well-attested preparation, *e. g.*, digitalin (Mercks Germanic), as has been so ably done by Henry Beates, makes for conviction which has done much toward enabling me to save several lives. So of the use of thyroid extract, recommended by by Sajous in bleedes hemorrhagic states, etc.

It seems to the writer that the most patent deficiency in our writings is the inadequate presentation of fundamental principles in definite formulations, To be sure, the admirable custom is growing for authors to place at the end of an article a summary of conclusions. Many times this is the only part read; if absent, the subject is often slighted or woefully misconceived. It requires some skill and an orderly mind to pick out the tenable formulations, the acceptable conclusions. The subject is better presented by reducing these to definite headings.

In text-books this is seldom done as completely as it should be. That medical paper is most practical which states the proposition fairly, presents the facts concisely, analyzes these clearly, estimates the underlying points, physiologic, pathogenic and others, accurately, builds up the argument logically, deduces conclusions: (1) those obvious or inevitable, (2) those reasonably certain, (3) those justifiably inferential, or (4) possible.

If treatment is the theme, it is well to proceed on much the same lines, giving various factors involved their due place. It is well to rehearse the outline of physiology or the organ or system under discussion, or the physiologic bearings of constitutional features in accord with the best light or one's own experience; treat the facts observed, in sequence, cause to effect; and finally to present personal views as to explanation of remedies or methods of application. If any special views are held, differing materially from those ordinarily prevalent, it is desirable to make the argument strong, based upon a sure foundation of physiologic truth, not merely current text-book statement. By this is meant not merely those views expressed in text-books on practice and the like, but derived from physiologists of ample certitude, or those who have fortified their knowtedge by drawing from similar incontestable sources.

A large mass of otherwise good material is visited by arguments based upon the acceptance of statements of "authorities" who themselves, nevertheless, failed to sift the findings which are accepted and loosely reasserted.

The reading public want, they earnestly desire, practical articles. These need not be long. Brief citations readily suffice, but

New York Post-Graduate Medical School and Hospital,

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when employed, the utmost care should be exercised that the statements utilized are sound, and deductions logical. Much of the "experimental" work, at least laboratory findings, is of doubtful utility, until they again are revised by yet other and critical persons. Unless all defective experimentation is excluded, false conclusions are reached, misleading rules become perpetuated. One form of "practical article" is greatly needed (or certainly more of them), in which shall be portrayed well-defined verities, legitimate finalities, theorems, precise rules of guidance along the lines of exact biologic reasonings. To be sure, they may not be easily construed, but are altogether possible. Credit, fame, rewards, would accrue in proportion as they should be well done. We have asked too persistently for novelties; let us learn also to welcome and appreciate sound reasoning on the wealth of data already in our hands.

The material from which "practical articles" can be constructed is plentiful. It is only necessary for the "reading public" to voice their demands, to make plain their approbation of accurate literary work and expect less good from the accounts of mere rarities. J. Madison Taylor in the Monthly Cyclopedia of Practical Medicine through Pediatrics.

Altona, Manitoba, Aug. 3, 1906.
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Winchester, Tenn.

I have been using your preparation "Anasarcin Tablets" during the last four years. With this drug I have treated cases of dropsy caused by heart, renal and hepatic disases, and I do not hesitate to declare that in my opinion, no matter what is the cause of dropsy, Anasarcin, if properly used, will produce results which causes great satisfaction to patients and to doctors as well.

Yours truly,
Dr. A. Deschambault.

Stephentown, N, G.
The Anasarcin Chermical Co.
Winchester, Tenn.

Gentlemen: In reply to yours of the 25th inst. will say the sample package of Anasarcin tablets was received. I gave them in a case of cirrhosis of the liver with ascites in which I had tried the usual remedies without any apparent effect. I had decided to tap the patient when my attention was called to your remedy, and although very skeptical about its being of any benefit, I gave it a trial. It "worked like a charm", entirely relieved the ascites and a month has now elapsed and there has been no return of the trouble.

In the future I shall use your remedy in all cases of dropsy for now I have great faith in it.

Thanking you for the sample I am,
Yours trmly,
C. A. Chaloner.

Troy, N. Y., Nov. 5, 1905.
The Anasarcin Chemical Co.
Winchester, Tenn.

I received sample box of your Anasarcin Tablets and used them in my own family in a case of valvular disease, and renal stenosis. Such a pronounced localized edema of face on rising, and fingers; seldom in extremities or abdomen. Had used the usual the usual remedies with no noticeable effect. Began with Anasarcin Tablets one hour before meals and on retiring. The result was most satisfactory, for on second day face and hands were normal and a better general condition of health has followed the continued use.

Elderly woman, fifty-six, had edema of feet, and ascites; mitral regurgitation. She

was quite portly and I had little time or opportunity to examine heart; however found her in the distress of an attack of mital regurgitation, followed by great agitation. Began the use of Tablets by crushing one and dissolving, giving solution of one every two hours. I was astonished at the rapid disappearance of the effusion, and the rapid betterment of my patients.

I have secured the tablets here in Troy, two boxes so far. I at first thought your literature rather strong, but now believe you are justified in all you claim.

Very truly,

E. J. Fisk, M. D.

Merle (Burleson Co.), Tex., Nov. 24, '06.
The Anasarcin Chemical Co.
Winchester, Tenn.

Yours of the 25th of October was received. In answer to same I will say that your tablets excel anything it has been my pleasure to use; they are exactly as you represent them, and no mistake is made by any physician using them. My confidence in them is centered in the following case. A German, 42 years, suffering from gout, feet swollen, appetite gone, cirrhosis of the liver, constipation, heart's action very bad. The man was a hard drinker both of whisky and beer; he could not sleep at night without morphine. I cleared the liver and bowel with a calomel and pod, purge, then commenced your tablets. He began so improve from the start using the tablets as directed, using all and only more box. He is now a new man; sleeps all right; no swelling of the feet; heart's action normal; eats sour kraut same as ever, and no taste for any beverages whatever. He calls the tablets "some buckshot."

I intend to use these tablets in all my cases where they are indicated.

With highest regards, I am,

Respectfully yours,

J. P. Carrington, M. C.

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The habitual use of narcotic drugs has become so prevalent that every physician has this class of cases to centend with in his practice.

Physicians as a rule make it a praclice to turn patients of this class away without encouragement, consequently the habitue has been forced to seek relief through nostrums advertised in the newspapers.

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Peritonitis.—Berry, The Lancet, says that underlying the treatment of all forms of peritonitis there are certain broad principles that should guide us to the best possible treatment in the individual cases. The reason that inflammation of the peritoneum is so much more dangerous than inflammation of other organs or tissues is that the peritoneal cavity is a vast lamphatic space, from which absorption of toxtins readily takes place. By peritonitis is meant the inflammation of the peritoneum produced by he presence of bacteria, either from the blood stream, as in the course of acute septic lesion of some other part of without as from a wound. In the majority of cases of acute appendicitis, the amount of poison that escapes is small and can be dealt with by the peritoneum itself, which is the reason that most of acute or subacute appendicitic recover spontaneously. In the case of the perforation of a large hollow viscus like the stomach or cecum, however, perforation is rarely preceded by adhensive inflammation, so that there is frequently poured out a vast quantity of septic material, much greater when he perforation occurs during digestion A sudden invasion of the peritoneal cavity by bacteria results in a rush of blood to the affected area. The abdominal viscera and the great omentum are engorged with blood, so that other parts of the body are greatly deprived of it. The author lays special stress on this as an important factor in the cause of the shock and feeble rapid pulse often met with in peritonitis and states that the proper mode of reatment is o replenish the empty vesels by giving the patient planty of fluid. In regard to the effusion of serious fluid into the peritoneal cavity, occuring in so many

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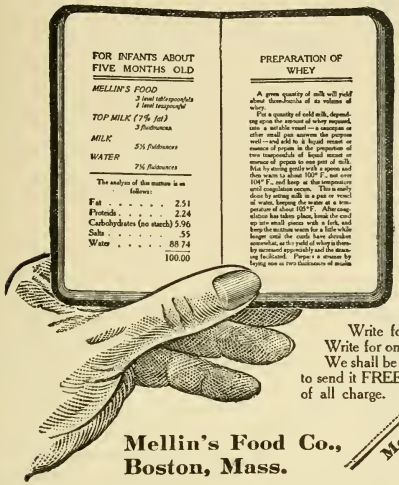
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1 level teaspoonful
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5½ fluidounces
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7½ fluidounces
The analysis of the mixture is as follows:
Fat 2.51
Proteids 2.24
Carbohydrates (no starch) 5.96
Salts 55
Water 88.74
100.00
PREPARATION OF WHEY
A given quantity of milk will yield about three-fourths of its volume of whey.
For a quantity of cold milk, depending upon the amount of whey required, take a suitable vessel—a saucepan or other small pan answers the purpose well—and add to it liquid rennet or essence of pepsin in the proportion of two teaspoonfuls of liquid rennet or essence of pepsin to one pint of milk. Mix by stirring gently with a spoon and then warm to about 100° F., but over 104° F., and keep at this temperature until coagulation occurs. This is easily done by setting milk in a pan or vessel of water, keeping the water at a temperature of about 100° F. After coagulation has taken place, break the curd into small pieces with a spoon and keep the milk warm for a little while longer until the curds have shrunken somewhat, as the yield of whey is thereby increased appreciably and the straining facilitated. Prepare a strainer by laying one or two thicknesses of muslin

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cases of acute peritonitis, Wright has shown that the baetericidal power of serous fluid diminishes in the immediate neighborhood of an affected area, and becomes exhausted. The letting out of this fluid by operation leads to the effusion if a further amount of fresh serum, and the destruction of more bacteria; hence the beneficial effect of drainage of inflamed areas. The beneficial effects of draining away the fluids in chronic tubereulous peritonitits are thus to be explained. Te further points out that the ffect of a dose of toxine on the opsonic power of the blood plasma is a lowering of the opsonic index—the induction of the negative phase. The addition of a traumatism at this stage means a further dose of toxin, so that the negative phase may be increased even o death. By yaitng a few days, however, the opsonic index is greatly raised above normal, and operations can be performed with greatr safety. As regards the question of the poison, Berry thinks that of late undue stress has been laid on the quality of the bacteria and too little on he quanity of poison in he case of a perforative appendicitis, and that it is on the quantity rather than on the quality that the severity depends, especially in peritonitis associated with appendicitis. In connection with acute appendicitis there is actual or visible perforation only in a minority of eases. In support of this, he quotes Ochsner's statisties.. He is opposed to the view of operating always, as soon as the patient is seen, for in this ease we should very often operate on patients at an unfavorable stage when mortality is high, and it is usually best to defer operation. A little later, intraperitoneal inflammation may have aided by shutting o ffand localizing the poison.

It is absurd to pretend that operations, especially major operations, on patients suffering from acute peritonitis do not earry with them much risk. The question is whether the risk of the operation, with its necessary attendant evils, is or is not more than counterbalaneel by the good it may do. Shock from manipulation and further absorption of poisons are the evils that may ensue from a large operation. The good thereof consist in closing the perforation or removing a septic focus to prevent further entrance of poison, and removing, to only a limited extent, however, poison from the peritoneal eavity. Poison can not be removed from the blood ,but by encouraging excretion mainly by the administration of fluid the blood can be helped to get rid of it. The writer divides all cases

of peritonitis into four classes: 1. Those in which there is no perfeoration of any viscus and no collection of fluid in the peritoneal cavity. The maount of poison is necesarily small in the peritoneal cavity, and eliminate treatment by free purgation with salines, and adminstration of large quantities of fluid by the mouth, rectum, or inervenously, is the chief indication. Opium should be avoided. 2. Cases in which we know or suspect that there is a recent perforation of a hollow viscus, such as the stomach or intestine. Here immediate operation should be performed with the object of closing the perforation and preventing further extravasation into the peritoneal cavity. The prevention of peritonitis, rather than its cure, is aimed at. 3. This important and numerous class includes the majority of cases of appendicitis. There is considerable peritonitis, involving much of the peritoneal cavity, with more or less tendency to the concentration of the inflammation in one lesion. Septic fluid is more or less localized. The patient's condition will depend on the extent to which the septic focus is shut off by omentum and adhensions, and on the absence of great tension. In such a case the operation for its removal may be far more dangerous than leaving a septic focus where it is; at any rate, for a short time, until a more favorable period for operation. Ochsner's opinions and statisties support this conclusion. In the presence of such cases we should ask ourselves, (a), What is likely to be the course of events if we do not operate at once? (b), What good and what harm may we do by operating at once? (c), If we opreate, what operation should be adopted? Berry discusses these three questions fully. He opens localized collections of pus, when sufficiently large, through the posterior fornix in women, and through the rectum in men. Great care must be taken to protect non-adherent peritoneal cavities. 4. In the fourth class there is a general diffuse peritonitis, with general distension of the whole abdomen, and purulent fluid diffused over a large portion or the whole of the abdomen. There is much difference of opinion regarding the appropriate thaeatment of this condition. The first plan is to keep the patient quiet and the stomach empty until the inflammatory processes and exudates have become localized, and if the patient lives uptil this has taken place, then to operate. The next method consists in freely opening the peritoneal cavity, breaking up adhensions, opening pockets, and irrigating the entire peritoneum. The third method includes opening the abdomen, removing the eause of inflammation, and thorough darinage with the least possible disturbance of viscera.

Having tried all three methods, the author believes that the Ochsner method is the most suitable for most cases of diffuse peritonitis. For the very class, Murphy's method of small abdominal opening, the closing of the perforation and the removal of the appendix, the introduction of a large drainage tube, with the patient in a siting posture, and the administration of salt solution by rectum every two hours is good. He agrees with those who condemn the very large operations, the mortality of which has been terrific. He notices a tendeney among surgeons of large experience to abstain more and more from such operations. He is greatly impressed with the advantages of a sitting posture, advocated by Murphy, and tries to persuade all who send cases of peritonitis to the Royal Free Hospital to adopt that precaution. Finally, he says: "It may seem to you an extraordinary thing for me to say, but I say it with delibration and with a profound conviction of its truth, that the very high gross mortality in acute appendicitis, which undoubtedly exists in this county (and in other countries as well) is largely due to the fashion of indiscriminate, excessive, and injudicious operating, which not long ago was at its height, but which I venture to think and sope is now showing signs of subsiding." Again: "It is not unusual to heat it stated that modern operations for appendicitis have resulted in a great saving of life. I believe that on the whole the exact converse is the case." He believes that a return to the old treatment of appendicitis in vogue twenty-five years ago would result in a lesser mortality. He does not refer to operations done by surgeons of large experience, but rather to the far larger number of operations performed by those who do not publish their results, and who do not discriminate between the cases in which operation is indicated and those in which it is not.

Cardic Massage.—Gross and Sencert (Arch. Prov. de Chir.) publish three fresh cases of intense chlorformic syncope treated by massage of the heart. In the first of these the conditions of success wer quite hopeless, as infradiaphragmatic massage was found to be impossible, and, after incision of the diaphragm, prompt and free acess to the heart was din-

dered by a collection of fibrino-purulent fluid in the pericardial sac, and by recent cardiac adhensions. In thes econd case animation was finally restored after prolonged syncope and unsuccessful application of ordinary methods by massage practiced through the intact diaphragm. The details of the third case, given in a footnote, indicate that infradiaphragmatic massage was rendered difficult by nelargement of the liver, and that the fatal result was due to cardiac lesions and to the presence of a retrosternal tumor formed by a persistent and much,enlarged thymus. These three records extend the list of the published cases of cardiac message to the number of thirty-four. In seventeen of these cases massage after opening the chest was successful in only one; the transdiaphramatic method practiced in five cases invariably failed; and in seven out of twelve instances of infradiaphragmatic massage animation was definitely restored. The outhors conclude that cardiac massage claims consideration as a very valuable resource in cases of chloroformic syncope. Clinical facts, hey point out, clearly demonstrate that, certainly in cases of chloroformic syncope, both the thoracic and the transdiaphragmatic method of massage ought to be proscribed. In fradiapharagmatic massage through a small median wound in the epigastic region is regarded as a simple, easy, and safe procedure, and one meriting a prominent place among important therapeutical methods.

The Cracked-Pot Sound in Abdominal Surgery.—Mangoldt (Zentralbl. fur Chir.) states that the bruit de pot fele, though usually regarded as of service only in the physical examination of pulmonary disease, has also a distinct importance in the diagnosis of abdominal effections. This ound can be readily elicited by percussion of an excised portion of intestine fully distended by fluid and air, but is very rarely to be made out under similar conditions in the living subject, except in cases of enormous distention by fluid and gaseous contents due to intestinal occlusion. The author has heard the metallic sound in five cases of appendicitis in which, after intervals of from two to three weeks from the beginning of the attack, suppuration in the ileocecal region was indicated by fever. At first he assumed that the physical sign in question indicated an abscess cavity containing fluid and air which was situated in front of the cecum. On operating for the incision and emptying of such abscess, it was, however, invariably found not in front of but behind the large intestine. On the other hand, cases in which the abscess cavity was in close contact with the anterior abdominal wall the author failed to hear the sound. The presence or absence of this sign may thus, it is suggested, be useful in establishing the differential diagnosis between an abscess behind and one in front of the cecum. The cracked-pot sound in cases of retrocecal suppuration is thus explained: The abscess compresses the cecum and ascending colon against the anterior adbominal wall, and these portions of large intestine being mechanically obstructed or paralyzed by inflammation, become distended by gas and fluid exudation, and so present very favorable conditions for the production of this sign. It is held that when, in the course of the second or third week of an attack of appendicits, this sound can be really made out on percussion over the outer margin of the right muscle opposite to the anterosuperior iliac spine, the surgeon may venture with fair probability of success to diagnose an abscess situated behind the cecum and the ascending solon. This sound the author has heard also in cases of intestinal occlusion due to obdurate hernia, to tumor, and to cicatrical stenosis, and will, he anticipates, be found on clinical diagnosis a reliable indication of the existence of intestinal obstruction and, moreover, of the seat of the same.

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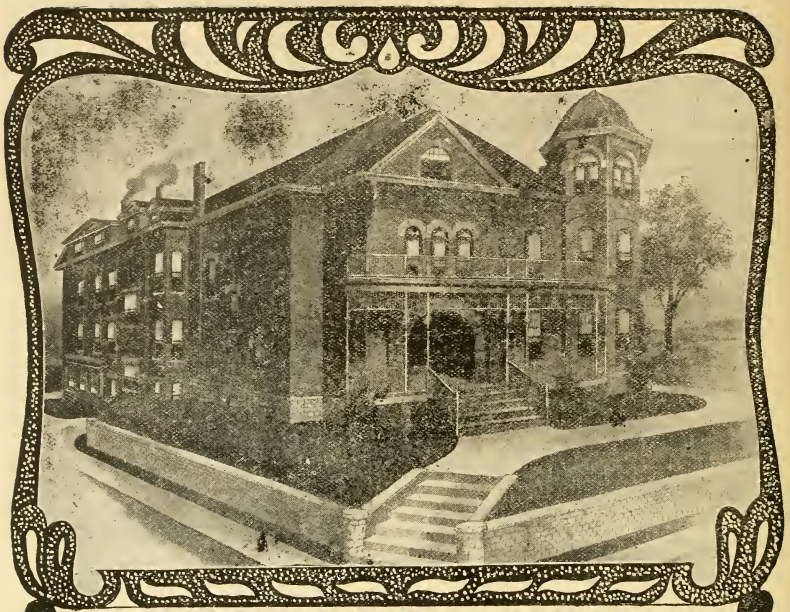

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Until recently the physiologic role of bile was not well understood, and there are still those who regard it as but an excretion. Later investigations, however, seem to have demonstrated that the normal bile acids, glycocholic and taurocholic, existing as sodium salts, aid metabolism by acting upon the secretory function, and influence digestion to a marked degree.

When given medicinally, the bile acid salts exercise a distinct cholagogue action as demonstrated by Croftan, Richardson, Tappeiner, et al., and serve to hold the cholesterin and bilirubin in solution, thus preventing their deposition and the formation of gall stones.

The more free flow of bile which they induce increases peristalsis and hastens onward the stagnant products of intestinal indigestion. These salts also aid in the emulsification and assimilation of fats, thus preventing "the formation of highly irritating and poisonous acid by-products" (Croftan) which are extremely deleterious in their effects on the general economy.

According to Richardson (New York Med. Journ. Sept. 30, 1905) none of the drugs of the pharmacopœia increase the secretion of bile to any appreciable extent, whereas the bile salts increase not only its liquid, but also its solid constituents. They act, also, as true hepatic stimulants, increasing the eliminating function of the organ, for it should be remembered that the liver is a toxin-filter, the poisonous elements being eliminated with the biliary secretion.

In cases of intestinal putrefaction, biliary calculi and hepatic insufficiency, I have recently utilized the preparations of the bile acids. There are not many, but the best combination I have yet found is Chologestin. In this product, sodium bicarbonate is added to reduce the gastric hyperacidity usually found in cases of hepatic trouble. The base of the preparation is the amorphous sodium salt of glycocholic acid, and, what I consider a very important ingredient, which not only has a cholagogue effect of its own, but which exerts a distinct antiseptic action in the bowel, is sodium salicylate from the pure oil of Wintergreen. Chologestin, with proper diet, exercise, plenty of water, etc., has proven of great benefit in my hands, in the treatment of all conditions arising from hepatic insufficiency.

The following cases are illustrative of the results from this form of treatment:

Case 1.—Miss H. E., 42. Frequent attacks of biliary colic for three years, with passage of small calculi each time, discovered by straining the stools. Her attacks varied in severity, but she refused operation, I regulated her diet, ordered systematic exercise, Carlsbad water before meals, sodium phosphate 3ii daily and small doses of calomel. The attacks recurred frequently until April, 1907, when the use of the bile acids was suggested to me. I tried sodium glycocholate alone for some time, but while the attacks were somewhat moderated they still recurred regularly. Chologestin was brought to my notice about this time and as the combination seemed a good one I began its use. The stones continued to pass for some time, but the severity of the attacks was greatly reduced. Miss E. passes a few very small stones now and then, but with very little colic. These occasional stones I do not take to be fresh ones. In my opinion the flow of bile was accelerated by the bile acid and sodium salicylate in Chologestin, hastening the carrying off of the stones; at the same time the bile salts, being increased in amount, held the Cholesterin in solution.

Case 2.—H. L., 35, lawyer. Has suffered for about a year with sharp pains over the gall-bladder, recurring several times a week. No history of the passage of stones, nor could any be found in the stools. The gall-bladder did not seem to be enlarged, although there was tenderness over its area, even during periods of remission. The patient's skin had a sub-icteric hue, appetite poor, tongue coated and bowels constipated. Ordered counter-irritation, gastric lavage and remedies for his dyspepsia. The pains continued and this spring he came to me. I had been so well pleased with Chologestin that it was at once ordered. The immediate result was not marked, but to my surprise the patient one day reported that he found two small stones in his stool, which I had requested him to examine carefully. Chologestin was continued. No more stones were discovered and the pain has almost entirely disappeared.

Case 3.—Miss D. L., 22, shirt-waist designer. Severe frontal headache, malaise, anorexia and vague pains throughout the body. Complexion muddy, tongue heavily coated, breath fœtid, and acid eructations, with nausea, after meals. Bowels obstinately constipated. Tentative diagnosis: "biliousness" or "torpid" liver. She was ordered an appropriate diet, sodium phosphate 3i each morning, and Chologestin one tablespoonful after each meal. Improvement was marked and rapid. The constipation was overcome, nausea disappeared and the other bilious symptoms improved with the stimulation of the hepatic functions.

Case 4.—I. H., 39, lawyer. Hemorrhoids for years, with the usual constipation. The patient is of a "bilious" nature with so-called "liver spots" on his face. Appetite

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Miss M. A. Newton, Superintendent.

good, except after some dietetic indiscretion, when his liver would not perform its duties well and the "bilious" symptoms followed. I prescribed diet, exercise and the regular treatment for "biliousness," but with little effect. I then ordered Chologestin, one tablespoonful, four times a day, in addition to the treatment originally ordered, discontinuing the sodium phosphate and calomel. In a few days he began to improve, the stools became looser, the tongue gradually lost its fur and in other ways the patient showed improvement. The hemorrhoids are not so annoying now, as his constipation has almost entirely disappeared and his liver is working normally.—JULIUS E. ALTER, M. D., New York, formerly Assistant Surgeon Bellevue Hospital, O. D. P.

Organization Medical Journals Should be Consistent.

In March World, page 117, we printed an article entitled "Independent and Organization Medical Journals;" and at the end of the article, on next page, we made some comments. Please see this article and our comments. We hoped that this showing would cause the editors of the State Society journals to consistently practice what they advocate and represent; that is, as they advocate organization of the profession, and edit an organization journal, they should favor organization of their own guild, and be members of the American Medical Editors' Association. That Association has nearly 150 members, but the membership does not include the editor of the Jour. A. M. A., nor of a single State Society journal. Here is a body of men who cry "organize," but they refuse to practice it in their own guild! To make a bad and discreditable matter worse, Dr. Philip Mills Jones, editor of the California State Journal of Medicine, has been trying to get up an organization in opposition to the established Association, confined to the organization editors.

Here we have a body of men who not only refuse to practice what they preach, but they *oppose* the established organization of their guild with an attempted competing organization. Do you want to know who these organization journal editors are who are not members of the American Medical Editors' Association? Here they are:

Dr. Geo. H. Simmons, editor of the Journal of the American Medical Association, 103 Dearborn Ave., Chicago, (by his position, the leading organization medical editor).

Dr. Philip Mills Jones, editor of the California State Journal of Medicine, 2210 Jackson St., San Francisco, Cal., (has been th

most active against independent medical journals, and has been attempting to organize an Association of State Society Medical Journal editors).

Dr. George N. Kreider, editor of the Illinois Medical Journal, 522 Capitol Ave., Springfield, Ill., (announces in March, 1907, issue, that his advertising pages have been "cleaned"—very easy when a wealthy State Society can be depended on to support the journal; but isn't this a rather late date for it to be done? The April issue contains two pages of copper mining stock advertising).

Dr. C. L. Stevens, editor of the Pennsylvania Medical Journal, Athens, Pa.

"Committee of Publication," editors of the Journal of the Medical Society of New Jersey, 95 Essex Ave., Orange, N. J.

Dr. Ira Carleton Chase, editor-in-chief of the Texas State Journal of Medicine, room 502, Continental Bank Building, Fort Worth, Texas.

Dr. B. R. Schenck, editor of the Journal of the Michigan State Medical Society, 502 Washington Arcade, Detroit, Mich.

Dr. Frank Winders, editor of the Ohio State Medical Journal, Columbus, O.

Dr. W. A. Jones, editor of the Journal of the Minnesota State Medical Association, Minneapolis, Minn.

Drs. B. H. Stone and H. C. Tinkham, editors of the Vermont Medical Monthly, official organ of the Vermont State Medical Society, Burlington, Vt.

Dr. J. W. Jervey, editor of the Journal of the South Carolina Medical Association, Greenville, S. C.

Dr. Geo. A. Moleen, editor Colorado Medicine, Denver, Colo.

Dr. W. B. Ewing, editor Utah Medical Journal, Salt Lake City, Utah. (This journal carries the antikamnia advertisement).

Dr. G. H. Hoxie, editor of the Journal of the Kansas Medical Society, Rosedale, Kansas.

Dr. C. C. Stephenson, editor of the Journal of the Arkansas Medical Society, Little Rock, Ark.

Dr. S. L. Jepson, Chairman Com. on Publication of the West Virginia Medical Journal, 81 Twelfth st., Wheeling, W. Va.

Dr. G. S. McLandress, editor-in-chief of the Journal of the New Mexico Medical Association, Albuquerque, N. M.

Dr. D. S. Lamb, chairman of the editorial committee of the Medical Society of the District of Columbia; which committee edits the Washington Medical Annals, Journal of the Medical Society of the District of Columbia.

Dr. J. P. Warbasse, editor of the New York State Journal of Medicine, has made application for membership in the American Medical Editors' Association. Of course he will be cordially received. In response to the article above referred to in March World, Dr. A. T. McCormack, of Bowling Green, Ky., editor of the Kentucky Medical Journal (being the Journal of the Kentucky State Medical Association), sent to the writer of these lines for *ten* application blanks for membership in the American Medical Editors' Association. The extra applications are perhaps for the associate and assistant editors; but *possibly* for campaign use among other organization editors. We were delighted to get Dr. McCormack's letter, which we sent to Dr. Jos. MacDonald, Jr., Secretary of the American Medical Editors' Association, 92 William St., New York City, and the application blanks have been sent.

We simply give the above facts to the profession, and suggest that the profession demand consistency on the part of the organization medical editors. Organization medical journals have a place, and a useful place; but during many weary years independent journals served the profession and prepared the way for the medical organizations and their journals. Organization editors should acknowledge the past service of the independent journals, and join the American Medical Editors' Association, and help to serve the interests of medical journalism. The independent journals still have a large and useful field, and they propose to continue their activity and usefulness—by the grace of the medical profession which they have served so long.

P. S.—A telegram just received from Dr. MacDonald says that Dr. E. J. Goodwin, editor of the Journal Missouri State Medical Association, 534 North Vandevanter Ave., St. Louis, Mo., and Dr. E. E. Dorr, editor of the Iowa Medical Journal, and the Journal of the Iowa State Medical Society, Des Moines, Iowa, are members of the Association. Therefore their names are gladly taken from the above list.—Medical World.

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titioners, at home and abroad, are employing Tyree's Antiseptic powder because they find it efficient, convenient, economic; of general utility, without injurious effects, immediate or remote, local or constitutional; healing, as well as antiseptic and germicidal; and equally well suited for use by patient as by medical attendent. One part in fifty of water, or smaller quantities, is rapidly germicidal to the most resistent bacteria. Weaker solutions are still valuable

antiseptics. That makes Tyree's Antiseptic Powder highly economic. Samples and particulars from J. S. Tyree, Chemist, Washington, D. C.

The medical profession has not only made its advances in the line of appliances in the treatment of diseases, but it is equally as well represented with the improvements that have been made in the line of a general antiseptic. There are so few antiseptics offered to the medical profession that can be relied upon in all cases where an antiseptic is indicated that when one is offered to the profession it is not surprising that it receives such a reception. One of the best antiseptics that is now offered to the medical profession and one that can be used with success in the treatment of minor and major surgery goes under the name of Campho-Phenique. It has been on the market for the past twenty-five years and there are very few physicians of any prominence today who have not used this remarkable preparation.

According to the reports of the Public Health and Marine Hospital Service, in 1906 there were in the United States 12,503 cases of smallpox and ninety deaths, while in 1902 there were 55,857 cases, with 1,852 deaths. In Germany, where vaccination is compulsory and universal, during 1900 there were only twenty-six cases, with five deaths, in the whole empire.

The report of the Sanitary Department of the Isthmian Canal Commission shows a decrease in the death rate for the month of April among the employees in the Canal Zone. Among 5,484 white Americans connected with the commission there were only four deaths in April, which gave a death rate of 8.7 per thousand. The decrease in mortality is due chiefly to the falling off of the cases of pneumonia. From this disease there were forty deaths in April, as against fifty-three in March, thirty-nine of the forty being among negroes. There were twenty-one deaths from typhoid, nineteen among the negroes and two among the whites. The number of hospital cases in April was about three-fourths the number in March, while the sick rate is only twenty-one a thousand.

Bubonic Plague in India.

The efforts of the British sanitary authorities in India are being greatly hampered in their efforts to restrict the spread of the plague by a story that has been circulated among the natives in the Punjab to the effect that there is no such disease as the plague, but that the recent mortality is all due to the fact that the government has been despatching emissaries throughout the country to poison the wells for the purpose of exterminating the population. The author of the story, who is a Hindu, has been captured by the police and sentenced to two years imprisonment. Thirty-three of his accomplices, who actually dropped mysterious balls into wells, alleging that they did so by the government's order, have been sentenced to eighteen months' imprisonment. The deaths by plague in India during the six weeks ending May 11 were 451,892. In the Punjab alone there were 286,777.—Medical Record.

Fire Destroys Dissecting Hall.

The dissecting room of the Medical Department of the State University, Chapel Hill, was destroyed by fire June 22, causing a total loss with the exception of the preserving tank. The trustees at once began the erection of a larger and more commodious structure.

At the thirty-ninth annual meeting of the American Medical Editors' Association held in Atlantic City, sixty-four new members were admitted. The following were elected as officers: President, C. F. Taylor, M. D., Philadelphia, Pa., editor of the Medical World; Vice-Presidents, Kenneth Millican, M. D., St. Louis, editor St. Louis Medical Review, and H. E. Lewis, M. D., New York, managing editor of the International Journal of Surgery; Secretary and Treasurer, J. MacDonald, Jr., M. D., New York, managing editor of the American Journal of Surgery.

Calx Iodata in Whooping-Cough.

I thought I would write to you some of my experience with calx iodata. Some time ago my attention was drawn to calx iodata by a "drug man," so I ordered an ounce of tablets to try in a case of croup if I had a chance. While waiting for the croup to appear I had a case of whooping-cough.

No. 1.—Boy about eight years old. Parents tried all kinds of remedies but with no results. I gave him calcidin and calcium sulphide and had him on the road to recovery in a few days.

No. 2.—Girl, three weeks old. Gave calx iodata to saturation. This baby coughed continually. In twenty-four hours was easier and recovered in a few days.

No. 3.—Boy, six weeks old, whooped every half hour during the night, but not so bad in day time. Gave him sixteen tablets in sixteen teaspoonfuls of water, directions one-half teaspoonful every hour until

relieved—then every two hours. The next night he coughed three times, continued to for a week and then was well.

No. 4.—Boy, five years old. Whooping-cough. Would vomit every time he coughed and was weak from want of nourishment. I gave calcidin every two hours. Next day he was better but vomited some. In three days no vomiting, and gaining in strength. No more whooping-cough.

No. 5.—My three boys, age eight months, three years and five years. All came down with whooping-cough. I gave the baby calx iodata and in a week no more whooping-cough at night. Slept well. The other boys calcium sulphide. The one aged three years would whoop twice at night after giving the treatment. The oldest one "whooped" twice and all told made a very quick recovery.

I treated over sixty cases of whooping-cough last winter (1905-6) from three years of age to 40, and with children who couldn't swallow a pill I gave the calx iodata in solution of water, and gave it to saturation and gave it quickly, and with as good results as if I had given calcium sulphide, as I did with the older ones. Didn't have a case that didn't get well with this treatment. Also used calcidin in Pott's disease with good results, also in enlarged tonsils, glandular enlargements, disease of middle-ear, etc.

I know of several doctors in this neighborhood who used it with the same results. —P. E. HANES, M. D., Maynard, Iowa. —*From the American Journal of Clinical Medicine, February, 1907.*

Fourteen Cases of Pneumonia—One Death.

I could not now think of treating pneumonia without the alkaloids. In the last

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three years I have treated fourteen cases of pneumonia, almost all ages, from infants up to eighty-four years; with one death. Was it the old one? Not any. It was a babe eleven months old, neglected by the mother, who was, I can say, a dirty slouch, not caring for the child.—J. C. DREHER, Kalamazoo, Mich.—*From the American Journal of Clinical Medicine, February, 1907.*

Is There a Rational Basis for a Scientific Therapy?

In the Medical Herald for February, Dr. William F. Waugh discussed this question. That our present therapeutics is satisfactory he thinks no one will contend. The practice is unsettled and the theory nebulous. Every work on therapeutics bewails the fact that the basis of the art is "empiric" guided by experience or observation rather than by scientific fact. Criticism has therefore been destructive. Headland pointed out the fallacies in present theories and Anstie showed that the old system stripped of its verbiage could be expressed in the phrase, "bleed down to the brandy point, and then brandy to the bleeding point."

Since Anstie's time an enormous amount of work has been done along the line of experimental therapeutics, and this work has necessarily been done with the alkaloids active principles, because with these alone scientific precision could be obtained. We know what atropine will do; we can only guess at the action of belladonna. Here is a wealth of data which may serve as a basis.

We have been taught to attack disease through its name. But Bright's disease, consumption, pleurisy, etc., are not true pathologic entities—are only employed by the more learned as conveniences. Many of them require at times remedies diametrically opposite to those required at other times. Despite this fact the formula diseases specifically by name.

The remedial agents that have been scientifically studied, and whose properties and powers have been most strictly defined, are not specific remedies for diseases but for conditions. We have agents that exalt and others that depress certain functions—it is up to the physician to ascertain in each case what functions of his patient's physiology need stimulation or depression, and then he must know the proper remedies and apply them. The more complete his knowledge of the physiologic processes of the human body, of the aberrations and alterations caused by disease, and the more precise his adaptation of therapeutic measures to meet the desired ends, the more nearly he approximates the ideal of the scientific physician. These propositions are axiomatic —there can be no discussion of them. The main point lies in the query, Have we such a wealth of remedial agents that can be applied with scientific precision, as will enable us to base upon them a system of practice that embraces the whole wide field with all its multifarious conditions and needs?

To this we answer, no—not at present. This work is far from being completed; but it has progressed sufficiently to give us a firm and broad foundation on which to build. The writer has spent years in collecting from all accessible sources, books, journals, monographs, etc., in all the languages of the civilized world, the data available on these topics. The results have been published in a volume of over 400 pages, entitled "Alkaloidal Therapeutics."

The Treatment of Infantile Diarrhoea.

I have found the following to be the most satisfactory method of treatment for the summer diarrhœas of infants. Firstly, administer a purge consisting of castor oil, rhubarb, calomel or saline. In my experience the last two are the most efficacious, one-tenth of a grain of calomel being administered every half hour for at least four doses, and sometimes until the motions assume a bilious hue. The saline is given in this manner: dissolve two teaspoonfuls of sulphate of magnesium in a teacupful of warm water, flavor with a little lemon, and then give two teaspoonfuls of this mixture every 20 minutes until the bowels are well cleared. Where the motion is of a dysenteric character the colon must be flushed out with some weak antiseptic solution.

So far as medicinal medication is concerned I have had the most brilliant results with copper arsenite given in doses of 1-1000 grain to 1-100 grain every ten minutes for from four to six doses and then every two hours. A most useful method for removing the horrid foetor of these cases is to give the sulphocarbolates of zinc, soda and lime, of each ½ grain; if given in combination with bismuth the bismuth will no longer blacken the motions, but the sulphocarbolates must be of the purest description or they will produce vomiting and other undesired effects. I find the subgallate or salicylate of bismuth acts better than the subcarbonate or subnitrate.

The other drugs which I most frequently use are cotoine, emetine, and hydrastine. In extreme algid cases I find the most useful aids in a good hot bath and a hypodermic injection of atropine sulphate 1-500 grain to 1-250 grain, or glonoin 1-250 grain. Atropine sulphate has been recommended for the extreme thirst in doses of 1-5000

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grain to 1-1500 grain every half hour. Opium I never use but give codeine sulphate 1-25 grain to 1-12 grain; or Gregory's salt 1-67 grain to effect. I have always thought that the better way of judging the dosage of narcotics for children was not so much the age as the weight and status praesens of the individual case. The best pain relievers I have found to be hyoscyamine 1-1000 grain, and strychnine arsenate 1-134 grain, every ten minutes to effect. The diet should be albumin water, oatmeal water, or plain ordinary water, flavored with lemon; if possible all milk should be stopped for at least 48 hours. The beef teas and extracts are of use as the easiest way of making broths without any grease. The high fever of these cases is best treated by small doses of aconitine or good hot baths.—WILLIAM AYRES, B. A., M. D., Dub.; The Lancet, June 2, 1906.

Brierley Hill, Staff., May 28th, 1906.

General Anesthesia by the Hypodermic Method.

The rapidity with which the Abbott-Lanphear method of anesthesia has advanced in the confidence of the profession is unparalleled. The method is simple, easily used, requires less assistants in surgical operations, is acceptable to the patient, is remarkably free from danger, is devoid of after effects to a greater extent than inhalation anesthesia, is recovered from promptly and can be adjusted to nearly all patients. Its most marked influence is in the slowing of the respiration, which is apt to alarm those who have not proven that no harm results, the respiration being that of deep sleep. The use of hyoscine instead of scopolamine is a great improvement on the original method, and the introduction of this substance, by Dr. Abbott, and of cactus in the form of cactin in the compound, hyoscine, morphine and cactin com. (H. M. C., Abbott) has added a safeguard which is invaluable, and which in time will be fully appreciated. Abbott has the confidence of the profession because he makes good. On his presentation it was promptly tried and another success is scored.

The thirty-third annual meeting of the Mississippi Valley Medical Association will be held at Columbus, O., October 8, 9, and 10, 1907, under the presidency of Dr. H. Horace Grant, of Louisville, Ky. The orator in Medicine will be Dr. Geo. F. Butler, of Chicago, Ill., and the orator in Surgery Dr. Frank D. Smythe, of Memphis, Tenn.

The Association is doing commendable work in furthering the cause of medical re-

search, by offering a prize of $100 for the best original essay upon some medical or surgical topic. The Committe of the Association to decide upon this contest is composed of Drs. Hugh T. Patrick of Chicago, C. H. Hughes of St. Louis, and A. H. Cordier of Kansas City.

Preparations are being made on an extensive scale for the entertainment of members and guests by the profession of Columbus, with the following Committee of Arrangements: Chairman, F. F. Lawrence; Secretary, Chas. J. Shepard; Treasurer, William E. Davis; Committee Ways and Means, J. W. Clemmer; Entertainment, J. U. Barnhill; Transportation, W. J. Means; Exhibits, W. J. Means; Reception, J. H. J. Upham; Press and Information, Frank Winders; Halls and Meetings, Earl Gilliam; Badges, J. E. Brown; Registration, Wells Teachnor; Ladies, Mrs. W. D. Hamilton.

Penal Code State of New York.

Section 401 of the Penal Code has been amended so as to read as follows:

Any person, who, in putting up any drug, medicine or food or preparation used in medical practice, or making up any prescription, or filling any order for drugs, medicines, food or preparation puts any untrue label, stamp or other designation of contents upon any box, bottle or other package containing a drug, medicine, food or preparation used in medical practice, or substitutes or dispenses a different article for or in lieu of any article prescribed, ordered or demanded, or puts up a greater or less quantity of any ingredient specified in any such prescription, order or demand than that prescribed, ordered or demanded, or otherwise deviates from the terms of the prescription, order or demand by substituting one drug for another, is guilty of a misdemeanor; provided, however, that, except in the case of physicians' prescriptions, nothing herein contained shall be deemed or construed to prevent or impair or in any manner affect the right of an apothecary, druggist, pharmacist or other person to recommend the purchase of an article other than that ordered, required or demanded, but of a similar nature, or to sell such other article in place or in lieu of an article ordered, required or demanded, with the knowledge and consent of the purchaser. Upon a second conviction for a violation of this section the offender must be sentenced to imprisonment, for a term of not less than ten days no more than one year, and to the payment of a fine of not less than ten dollars nor more than five hundred dollars. The third conviction of a violation of any of the provisions of this section, in addition to rendering the offender liable to the penalty prescribed by law for a misdemeanor, shall forfeit any right which he may possess under the law of this state at the time of such conviction, to engage as proprietor, agent, employee or otherwise, in the business of an apothecary, pharmacist or druggist, or to compound, prepare or dispense prescriptions or order for drugs, medicines or foods or preparations used in medical practice; and the offender shall be by reason of such conviction disqualified from engaging in any such business as proprietor, agent, employee or otherwise, or compounding, preparing or dispensing medical prescriptions or orders for drugs, medicines or foods or preparations used in medical practice.

SECTION 402. This act shall not affect or impair any liability, penalty or punishment under the provisions of section four hundred and one as the same existed prior to the time this act takes effect, but the same may be enforced, prosecuted or inflicted as fully and to the same extent as though this act had not been passed; and all actions civil or criminal instituted under or by virtue of said section as the same existed prior to the passage of this act, and pending immediately prior to the taking effect hereof, may be prosecuted and defended to final effect in the same manner as though this act had not been passed.

SECTION 403. This act shall take effect September first, nineteen hundred and seven.

The Use of Adrenalin During Ether Anesthesia.

Recognizing that my experience in the use of adrenalin during ether anesthesia is but very limited, covering a course of only eighteen cases, and knowing the many fallacies attendant upon too early conclusions, I feel a great hesitancy in making this report. However, owing to the uniform result that has attended its use, I am prompted to do so now.

I found that 25 per cent. aqueous solution of the standard 1 in 1000 gave the best results, and that by first pouring ether in the towel cone and spraying the adrenalin solution on it, depending on the ether to vaporize it sufficiently for inhalation, was the best mode of administration. Three to six minute intervals are sufficient for its use and a total of from one-half to one ounce of this solution is enough for an operation lasting from thirty minutes to an hour. The effects are a more uniform etherization, the pulse becoming steadier, slower and of better character more rapidly than under ether alone; respirations are quiet and regular, the bronchial secretions are practically checked, and the progress of the operation is not interrupted.

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These cases were not selected, and among them were old alcoholics; two women over sixty, one of them nearly eighty years of age. Three were very long tedious operations, lasting over two hours, and in none of the series was any stimulation required during the anesthesia.

Recovery from the anesthetic was uniformly good; there was practically no post-operative shock, and no stimulation was needed in any one of the cases; only two patients vomited at all and very little nausea was complained of.

From the foregoing facts I conclude that owing to the contraction of the smaller vessels the bronchial glands secrete less mucus, and there is better aeration in the bronchioles and pulmonary vesicles, less ether is required to produce anesthesia and there is less probability of ether pneumonia following. The adrenalin, acting generally from absorption, is a powerful stimulant; it materially lessens shock, lessens the capillary ooze at the field of operation, and is of great benefit to the much weakened patient.—CHARLES S. VENABLE, M. D., Charlottesville, Va.; From the Virginia Medical Semi-Monthly, February 22, 1907.

The Cure of a Case of Osteomalacia.

In an article on the suprarenal glands and osteomalacia, in the Munch. Med.

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Wochenschrift, 1907, p. 278, L. M. Bossi, of Genoa, describes the almost marvelous cure of a serious case of osteomalacia by subcutaneous injections of adrenalin. The patient was a multipara, 38 years of age, who was *enceinte* in the eighth month and had a well defined osteomalacia. After seven hypodermatic injections of adrenalin, each of which consisted of ½ cg. of adrenalin of the 1-1000 solution, the patient fully recovered.

Antiphlogistine versus Opium.

Inflamed states of the various organs of the body frequently give rise to pain of such urgent character as to demand active steps looking to its relief. Upon seeing the patient for the first time (he has called his physician because his suffering has become intolerable) the medical attendant is met with a peremptory demand for relief from the suffering.

With a willingness, which frequently overrides their better judgment, some physicians resort to the hypodermic needle indiscriminately, and, in too many cases, a greater evil has followed the lesser one. The free habit of using morphine or some other form of opium is not a judicious practice, and for several reasons. The exact seat of an inflammation, for instance, might become difficult to locate, and thus a clear diagnosis interfered with. But the greater objection to the use of opium is the possibility of adding a recruit to the ever growing army of habitues.

Every time there occurs to a doctor the apparent need of opium he should deliberate well before resort is had to the needle. If, after careful consideration, his best judgment advises the use of opium, it should be given in some form by mouth. If the needle is used the patient at once knows what he is getting, but he is not so likely to acquire this information if it be given otherwise.

For relieving the pain of the inflammations Antiphlogistine will easily take the place of opium. The relief following may not be so prompt and so complete, but the edge of the suffering is taken off within a short time, and soon the patient is in a comfortable condition and has escaped the possibility of becoming addicted to a drug. There is not the likelihood that a patient, relieved from pain by it, will begin eating or using Antiphlogistine in any other way —which likelihood is the greatest disadvantage of opium.

In the future let your morphine become stale, and keep your Antiphlogistine fresh —use it in inflammation.—The Medical Era.

Hay Fever.

Dr. E. Fletcher Ingals, Chicago, writes: The prescription for hay fever in the department of Therapeutics in The Journal July 6, 1907, p. 84, and credited to me, I am unable to remember as having recommended at any time, for it certainly is objectionable in several ways: 1st, I have not tested resorcinol in this connection; 2nd, the adrenalin chlorid, one-half grain to two ounces, would be very irritating in most cases of hay fever, and 3rd, the boric acid I do not use in this connection, as I find the biborate of soda much better. I have found the following prescription very useful in some cases and think it well to try it in every case:

℞	gm.
Cocainæ hydrochlordi	15 or gr. iiss
Sodii boratis	30 " gr. v
Suprarenalin (1-1000)	4 " 3i
Glycerini	2 " 3ss
Aquæ camphoræ ad	30 " 3i

M. Sig: Use as a spray to the nose four or five times daily, or oftener if needed.—Journal of American Medical Association, Aug. 10th, 1907.

Pain.

This is the condition we are most often called upon in a hurry to relieve. Our therapeutic measures employed will be gauged by the cause, location, severity, etc. A hot water bag should always be accessible. Hypodermics of morphine should be used as sparingly as possible. Papine is an excellent pain-reliever that is devoid of the danger and unpleasantness of ordinary opiates. It relieves pain promptly, but does not produce narcosis, constipation, etc.—W. T. Marrs, M. D., in the Medical Herald.

The Kentucky Midland Medical Society held its forty-sixth quarterly meeting at Lawrenceburg, Ky., July 11th, 1907. Papers were read as follows: "Surgery by the Country Doctor," by Dr. C. M. Paynter, Lawrenceburg, Ky.; "Chronic Endocarditis," by Dr. J. W. Crenshaw, Versailles, Ky.; "Remote Results of Adenoid Growths," by Dr. J. S. Coleman, Frankfort, Ky.; "Entero-Colitis," by Dr. R. J. Estill, Lexington, Ky.

Diagnosis of Late Hereditary Syphilis.

Landouzy says that in some way the effects of syphilis are evident in two-thirds of the patients seen at hospitals. The method by which we cannot miss making the diagnosis is that of a systematic examination of the patient's history, his bodily condition, and the condition of the other members of his family, including collateral branches.

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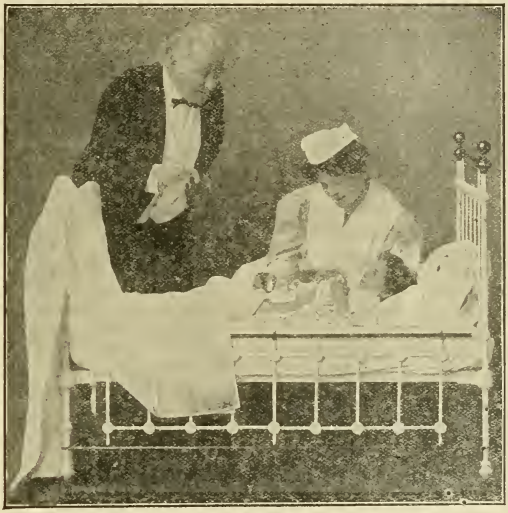

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Study the physiognomy and appearance of the patient first, looking for dystrophies. The stigmata of the habitus have the greater diagnostic importance. Then come infantilism, early obesity, cranial, facial, ocular, and dental manifestations of syphilis. There are many changes in the shape of the bones of the skull. There are changes in the skin and mucous membranes, testicular and nervous stigmata, such as absence of reflexes, tic, epilepsy, tabes, intellectual and moral lack of development; there are diathetic conditions, hemoglobinuria, bradytrophies, failure of growth, visceral conditions, cardiovascular, and cerebrospinal affections that are congenital. The discovery of such stigmata alone or combined in a patient may be confirmed by examination of other members of the patient's family. These persons should be seen and examined. Factors of importance are infantile polymortality, abortions, twin pregnancies. All these conditions will be of diagnostic value. La Presse Medicale.

Suppurative Mammitis After Typhoid.

Roger, Gazette des Hopitaux, describes the case of a young woman attacked with typhoid fever and convalescing in whom the left breast gradually underwent abscess formation without pain and with a very slight elevation of temperature. After opening the abscess it healed rapidly. On examination of the pus from the abscess it was found that the bacillus present resembled most the paratyphoid bacillus. In this case the typhoid intoxication had been very severe, characterized by vomiting, myocarditis, and dyspnea of bulbar origin with cyanosis. Only twenty-four cases of mammitis after typhoid can be found in literature. It appears at the end of the disease and with slight elevation of temperature. As soon as the collection of pus has been incised it heals. Previous lactation with its attendant congestion favors this complication. Of the cases in which the pus was examined two contained Staphylococcus aureus, one Staphylococcus albus, two the bacillus of Eberth, and one the paratyphoid bacillus. Hence the cause of the complication is not always the same.

Pulsating Points in the Diagnosis of Arteriosclerosis.

Minervini, Giornale Internazionale delle Scienze Mediche, goes over the etiological factors in the production of arteriosclerosis, the cerebral tension, degenerations as a result of intoxications, and infectious diseases being the principal ones. The arterial changes may appear in the heart, liver, kidneys, spinal medulla, brain, or peripheral vessels. An early diagnosis is most important, since there is a presclerotic state that may be recognized, and the causes eliminated by individual and social prophylaxis. The general arterial condition is shown by the tone of the vessels, character of the pulse, and auscultation of the aorta. The principal signs are instability of the pulse, digitocapillary sign, sphygmographic tracings, accentuation of the second aortic sound, systolic bruit over the aorta, with a hard but not small pulse, slightly retarded, systolic silence over the aorta, doubled first aortic sound, intermittent claudication, vertigo, cerebral symptoms, pericorneal ring, spinal symptoms, premature senility, radial rigidity, and pulsating points over the radial and other arteries. The author occupies himself especially with the pulsating points. Those of the radial are three, at the division of the humoral artery into the radial and the cubital, at the junction of the upper and middle thirds of the radial artery, where it ceases to be oblique, and at the pulse point. There are important pulsation points also in the jugular fossa, over the carotid, in the omohyoid triangle, subclavian, axillary, humeral, femoral, and popliteal regions. Visible arterial pulsation is due to four factors: Increased cardiac contraction, increased distension of the arteries due to decreased aortic tension, greater expansion, and rapid pulsation. These points do not pulsate in the normal man. By the number and force of the pulsating points we may be assisted in the prognosis of the cardiopathy.

The Habitual Vomiting of Infants.

Peiser, Berliner klinische Wochenschrift, says that the infants who habitually vomit may be divided into two general classes. The first of these appear to thrive fairly well in spite of the disorder. Some of them indeed may exhibit unusually good development. A large number of these children are breast-fed and the condition frequently depends on irregular feeding at too short intervals. On regulating the hours of nursing the vomiting stops promptly. In another group the vomiting is the result of a milk that is too rich in fat and treatment must be directed toward diminishing this constituent either by reducing the size of the meals, by removing some of the fat from the milk, or most simply, by reducing the total daily amount, by lengthening the interval between meals. Another group belonging to the first class consists of the neuropathic children who are always restless, sleep badly, are subject to laryngismus stridulus, and are hard to manage. The treatment of these cases is difficult, but the symptoms ordinarily disappear on weaning. Children belonging to the second class are

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The Tri-State Medical Association of the Carolinas and Virginia (only members of State Societies eligible). Next Annual Meeting: Charlotte, N. C. Date of meeting: February 18-19, 1908. President, Dr. Stuart McGuire, Richmond, Va.; Secretary-Treasurer, Dr. J. Howell Way, Waynesville, N. C.

The New York Department of Education has registered in *group one* only five of the twenty nine Medical Colleges in the Southern States, This means that in the judgment of that Department only five are conducted on approved lines in all respects.

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apt to be undernourished and possess flabby muscles with much reduced gastric motility. Their vomiting is more in the nature of regurgitation, and they ordinarily manifest the symptom only if disturbed after meals. As the result of x-ray observations of the stomachs of such children the author has come to the conclusion that owing to the universal muscular relaxation the cardia is incompetent and through the lessened motility the food remains a long time in the stomach and is thus easily forced up into the esophagus. The treatment of these children is mainly constitutional and should be directed toward an improvement in their general condition. The author leaves out of account the typical and well characterized cases of pyloric stenosis, but describes one unusual case which came to operation. This infant's abdominal cavity was found to exhibit exceedingly numerous adhesions binding together the coils of intestine and probably resulting from a fetal peritonitis.

The Constipating Action of Morphine.

Magnus, Munchener medizinische Wochenschrift, describes observations on the effect of morphine on the intestinal tract. These were made mainly on cats, though some dogs were also used. Nothnagel maintained that therapeutic doses of morphine stimulated the splanchnic inhibitory fibers and in this way checked intestinal motility. Some observers have agreed with this view, oihers have opposed it, but most of them have regarded the small intestine as the chief site of the morphine action. Magnus found by means of radiographic observations on cats in whom diarrhoea had been induced by milk diet that it is the stomach that is most affected by the alkaloid. The constipating effect is not produced through the sympathetic inhibitory fibers, for section of these in the experiments animals did not modify the results. The chief action of the morphine consisted in a persistent contraction of the stomach wall in the neighborhood of the so-called sphincter of the pyloric antrum. At the same time the pylorus retarded the passage of the food into the duodenum so that it entered the small intestine much belated and then only very slowly and in small portions that were more fully digested than usual. The small intestine was but slightly affected and the colon least of all. The author reminds the reader that these results as yet apply only to the two varieties of animals experimented on and suggests careful clinical observations with a view to estimating the fidelity with which the conditions in man are reproduced in the animals.

Stomach Secretion in Healthy Individuals.—Fofanow (Russki Vratsch) concludes his studies as follows:

(1) The greatest quantity of free HCl in the stomach contents and a juice according to Mott most active in digestion is called forth in the experiment by exciting the person with the sight of a meal. In these experiments one obtains a juice of the same digestive strength and containing the same amount of HCl when one excites the subject by allowing him to chew a piece of food and then to spit it out. (2) In the second place in regard to its HCl content and digestive power is the juice called forth by swallowing ice water. (3) In the third place in regard to its HCl content and digestive power is the gastric juice which is obtained one hour after the Ewald test meal. (4) Warm water, and still more so hot water, in contrast to ice water, calls forth a secretion five times as weak in HCl as the ice water secretion. (5) Mastication alone causes a secretion of gastric juice of about the same strength in HCl and of the same digestive power as that brought about by hot water. (6) If the act of chewing is also accompanied with swallowing, the quantity of free HCl in the stomach content is about three times as small as that obtained after chewing alone, the dilution with saliva having to do with the decreased HCl content. (7) The mechanical irritation of the stomach for thirty minutes by means of charcoal pills apparently causes no secretion. One obtains a small quantity of thick mucus without a trace of free HCl. (8) The Ewald test meal, and more particularly the Leube meal, can give different values in the HCl content according to the method of taking the meals; the more time taken in consuming the meal, the more thoroughly mastication is performed so much the higher is the gastric juice both in HCl and in digestive power. In order to minimize error the Ewald meal should always be eaten within the same time and with the same number of masticating movements and swallowing acts. It is most practical in the Ewald meal to divide the bread into approximately four equal parts and to order eight chewing and swallowing movements for every part.

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Some Thoughts on Resection of the Hip-Joint for Tuberculous Disease.

By Wm. Thompson Berry, B. S., M. D., Birmingham, Ala., Associate Prof. Anatomy and Prof. Orthopedic Surgery in the Birmingham Medical College.

Very often it happens that a surgeon will excise a hip-joint when by careful and patient watching and treatment of a diseased hip he could have cured the pathologic condition by more conservative measures. There is a decided tendency among many surgeons to radically treat an early case of tuberculosis of the joint by excision, as they say early resection of a joint cuts short the disease, stops pain, abbreviates time of treatment and gives a better limb, but many more of our best surgeons favor later radical interference and more conservative treatment. They claim resection of a hip-joint is not justifiable as long as the conservative treatment can be carried out for a length of time with good supervision.

We must remember in considering the advisability of operative procedure in a diseased tubercular hip-joint that upon removal of the head of the femur we take away one of the main supports nature has provided for the upper body, and that in spite of good operative technique the joint is many more times mutilated than it is by the more conservative plan of treatment, which will likely leave your joint ankylosed but firm. Then it is a severe operation, oftentimes a fatal one. I am one who believes in resection of the hip-joint only after conscientious conservative treatment has failed to help a tuberculous joint and where the fullness in the groin has increased, night cries continue, or primary acetabular disease is present or true dislocation occurred, when tenderness does not subside and the disease shows signs of progress without abatement.

Von Bergman, Volkman, Konig, Kocher, Billroth and many other foreign surgeons are advocates of the conservative treatment. Dr. G. A. Wright, who a few years ago advised radical interference in any tuberculous arthritis, now says he doesn't believe resection of a joint is so often called for in a tubercular infection of the joint. The prognosis of any excision of the hip depends upon the extent to which the disease has progressed, which of necessity will determine how much bone tissue will have to be removed. Some men claim that when the head of the femur is largely involved by a tuberculous infection the neck will later be involved and destroyed, and therefore the neck and great trochanter should always be removed with a diseased head of the bone. I am sure many of us have seen cases where the removal of a diseased femoral head resulted in a better, more serviceable and longer limb than could possibly have been the case if the neck and great trochanter had been removed. So it is well to carefully consider your case as to a future useful member, even though you do not find much diseased area. When the upper end of the neck and the acetabulum is diseased a wide dissection of all structures involved will give a better result than will a partial resection. But because a head of the femur is alone involved it is not wise to excise also the neck and great trochanter which is too often advocated.

The age of the patient is to be considered of importance in deciding upon an excision of a hip. In an adult patient the amount of bone removed will determine your degree of shortening, while in childhood the limb operated upon will grow shorter and shorter, not only because of removed bone and upward displacement of the femur, but also to lack of growth of the bone. It has been estimated that the growth of the femur takes place equally at its upper and lower epiphyseal lines until the fourth year of life, and later three times as great at the lower end as at the upper end. A resection of the hip done in early childhood will necessarily affect the growth of the bone. Fortunately the operation is more often required in the young than the adult. Adult excision means higher mortality than in the younger patients. The great shortening of the affected limb after an excision is the late unfortunate result to be dreaded. An average shortening of 3½ to 4 inches, following a resected hip at about 7 years of age, 12 years after the operation is a good result, but oftentimes a shortening of from 5 to 7 inches may be noted. If bony ankylosis takes place without deformity it will give a serviceable limb and can be easily corrected if it should be deformed and ankylosed. Close fibrous union with from 20 degrees to 50 degrees of motion is the most common result gotten after a resection of the hip. The usefulness of the limb varies greatly, as the joint is insecure. Sometimes a new joint may form and the result be a brilliant one, but in nearly every case the upper end of the femur does not rest upon the acetabulum, but above it on the side of the ilium. We must remember that by resecting a tubercular

hip it does not mean a prevention of systemic infection. I have known cases where it seemed to disseminate the infection and the patient develop a miliary tuberculosis after the operation. The method of excising a hip materially affects the immediate and final results. The operation should be performed as quickly and thoroughly as possible with but little loss of blood. The anesthetic should be employed as briefly as possible, and everything done to avoid shock. As a rule these patients are emaciated, their general condition and vitality are away below normal. A longitudinal incision 4 to 5 inches long is made in the middle of the great trochanter, extending upwards beyond the trochanter for 2 or 3 inches in a line, the direction of which runs toward the posterior spine of the ilium. The bone is at once exposed, the gluteal muscles separated and the rotators now exposed and cut transversely. The finger passed along the neck of the bone. The capsule comes into view, it is split longitudinally and the head exposed. The muscles and their attachments over the trochanter are raised with the periosteum by the scalpel and elevator. The cotyloid ligament is incised, the head rotated out and the ligamentum teres cut. The head of the bone can now be pushed through the opening in the capsule and the excision completed. If there should be very much hemorrhage deep in the wound it is better to pack the cavity with gauze and leave it in the wound for several days. Extension, immobilization and protection of limb should follow the operation and be continued for several months (one year or more) which will depend upon the different conditions present in any particular case. Passive and active motion of the limb must be started just as soon as you feel sure it will not relight the disease.

Chloroform Anesthesia.

By Albert D. Parrott, Kinston, N. C.

In writing this article it is not the author's intention to add anything new to this practically unblazed trail of medical and surgical science, but to set forth and emphasize some facts, that if heeded will unquestionably be of service to those who occasionally administer it in obstetrics, minor surgery, &c., and the house surgeon who is called upon every day to give this most useful drug. I was house surgeon to St. Luke's Hospital, Richmond, Va., for a period of twelve months, and during my stay there gave it in over five hundred cases, and saw it given even more than that—with only one fatality—and that a child two and a half years of age. In this case the child had typhoid perforation of nearly thirty-six hours standing, and was hauled on a train nearly 200 miles—consequently was at the time of chloroform administration in a moribund condition, having a general peritonitis, &c. This child died before the peritoneal cavity was entered, but on the operating table. I do not attribute this death in any way due to chloroform, but to exhaustion, toxemia, &c., incident to the long seige of fever. In the administration of this drug only the purest article should be used. Proven by experience Squibbs is of unequalled purity. Before starting the anesthetic, say about half hour, I think it best to give morphia gr. ¼, especially in alcoholic, plethoric, stout bull-neck individuals, and frightened by hysteric females. In the event that morphia is not given before hand, if the subject after a few inhalations becomes suddenly alarmed, boisterous, or has nervous shivers, one cannot do better than administer from ¼ to ⅓ morphia, supplemented by atropia gr. 100-150. This has a happy tranqulizing effect, quieting nervous apprehension and stimulating the heart, and materially aiding in its administration. I always give this even if I only have a faint suspicion that the patient is or has been an inebriate. It can do no harm, and in the vast majority of cases has a most happy effect. Before beginning chloroform for any purpose it is most essential that the alimentary tract is thoroughly cleaned out by purgation. The day before it is to be administered the patient should have a compound cathartic, and of these combinations there is none better than Comp. blue mass pills. About two of these are given the night beforef and early next morning should be followed by a brisk saline cathartic, such as Epsom, Rochelle salts, Apinta water, &c. I consider this very important, indeed, not only because chloroform may be easier given and operation more easily performed, but the after effects are far less baneful.

The patient should never be chloroformed in the operating room, but in an ante room, and the anesthetist should have at least one female assistant and she should stay by his side all the time, never leaving the room for anything. Patient should be in horizontal position, without pillows under head, clothing carefully loosened about neck. There should be no heavy blankets on chest, and should be thoroughly ascertained whether foreign bodies of any kind are in mouth, such as false teeth, chewing gum, tobacco, &c. Having gotten everything in readiness we are ready to begin the chloroform. Let me say right here in the beginning, no patient should be brought to the surgical or third stage of chloroform anesthesia under fifteen minutes. I consider it

criminal to get them down in a shorter time. Before going into the technique of its administration I will give its action on the nervous and circulatory systems, they being the ones chiefly concerning us here.

Active or Nervous System.—Chloroform is an excellent instance of the law of dissolution, and also of the well known fact that drugs, which in small doses stimulate any part, in large doses often depress it.

Law of Dissolution.—The law of dissolution which when stated as it applies in pharmacology is as follows: When a drug affects functions progressing those first affected are the highest in development; that is to say, they are the last acquired by the individual, and the last to appear in the species. The next affected are those next to highest, and so on; till finally the lowest of all from an evolutionary point of view; that is to say, the functions of respiration and circulation are affected. This law is very well exemplified in the case of alcohol, for the first functions to be disordered are those of the intellect, especially the highest, such as judgment and reason; then follow disorders of movement, and finally death from failure of respiration and circulation. The phenomena resulting from the inhalation of chloroform are commonly divided into three stages.

First Stage.—This is, at first, one of general stimulation, the highest functions being the most stimulated, usually unevenly, so that the patient is somewhat incoherent. The imagination is momentarily excited, and he experiences a general feeling of warmth and comfort spreading over the entire body. The mind from the irregular excitation is confused. Sight and hearing are stimulated, he experiences sensations of light and hears noises. The stimulation of these higher functions is very transitory, and he quickly begins to lose consciousness. He may be aware of people around him talking without knowing what they are saying, but soon he sees and hears nothing. Sometimes during the early part of this stage he may laugh or cry. The inability to see and hear is quickly followed by considerable blunting of general sensation. At the same time that these higher functions are being depressed the lower motor functions are excited; he will kick and fight, throwing his arms and legs, so that much strength may be required to hold him down, and he will shout and talk incoherent nonsense very loudly. Almost coincidently stimulation of the lower centres sets in, the pulse is increased in frequency, and there is a throbbing of the heart and great vessels. The first inhalation or two may produce a choking sensation and a stoppage of breathing, which is often voluntary; but soon the respirations are increased in frequency. The blood pressure at first rises a little, and the face generally flushed. The pupils usually dilate.

Second Stage.—This is bust called that of depression. Some authors call it the stage of excitement, because the excitation of the motor centers may be continued into it. It is important to remember that there is no sharp boundary line between the various stages, they pass insensibly into one another. In this stage the depression of the highest functions continues so that the patient becomes completely unconscious, and he appears to be in a deep sleep. He sees, hears, and feels nothing, hence chloroform is called a *general* anesthetic. The excitement of the motor function passes into depression and he ceases to shout and struggle. Some of the reflex centers are depressed, so that when the cornea is touched the eye does not shut. The pupil is contracted. The stimulation of the cardiac and respiratory apparatus gives way to depression, the pulse and respiration become less frequent and less strong. The vaso-motor center is depressed, blood pressure falls. As he cannot feel pain and the reflex activity is so lowered that the heart will not be reflexly inhibited by the shock of an operation this is the period at which to operate safely, although I have seen patients that would not breathe until they were stabbed with the knife, and have frequently seen the peritoneal cavity opened, piles clamped and seared with Pyelmis cautry, &c., without the slightest suspicion of shock. This practice cannot be too severely condemned.

Third Stage.—Fortunately, or unfortunately, which ever it may be termed, I have only seen a few cases reach this desperate stage. One I shall never forget made an indellible impression upon me, and stands out as boldly and vividly as if etched upon the hardest steel, especially when I am anesthetizing an aged patient, or one who is an inebriate. The case in question was a middle aged man suffering from gall-stones. The surgeon was doing a cholecystotomy and everything was progressing nicely when suddenly without the slightest warning the patient seemed moribund. Everything possible was done, but all attempts were futile. It was like searching the "Great Beyond" for departed spirits. In this stage there is a total abolition of reflex excitability when the lowest reflex centres of the cord are depressed, so that the patient may pass his urine and feces involuntarily. All muscular tone is abolished, and consequently the muscles are quite flaccid. Some of them, as those of the arm were probably in this condition towards the end of the second stage. The pupil is widely dilated, probably be-

cause of commencing asphyxia. If still more chloroform be given the depression of the cardiac, respiratory, and vaso-motor centers continues, the pulse becomes feeble, and the heart finally stops in diastole. At last not only its central nervous apparatus but its muscular tissue is depressed, so that it will not respond to mechanical stimulation. The respiratory movements become slight and irregular, with very long pauses between them, and as a result the patient is more or less asphyxiated. Blood pressure gradually falls to zero. There has been some dispute as to how chloroform kills, i. e., whether by respiration or circulation. In my own humble opinion it kills by paralyzing the respiratory centres. The recovery from chloroform also illustrates the law of dissolution. The lowest functions, such as muscular tone, are the first to reappear, but the patient does not usually regain his mental equilibrium for hours.

Having dwelt at some length upon the physiological action of chloroform incident to its inhalation, I will now describe the technique of its administration. Never bes gin chloroform anesthesia without the meanof resuscitation close at hand. These consist of hypodermic syringe loaded with strychnia, gr. 1-30, atropine, gr. 1-00, tongue forceps, mouth gag, wad of sterile gauze, towels, oxygen tank in readiness, and pearls of aryl nitrite. The patients eyes are bound with a towel, neatly and comfortably folded behind the head. The room should be well ventilated, but of course the patient should not be exposed to currents of air. A few drops of chloroform are now poured on the inhaler, (preferably *Esmarchis*) and held at least eighteen inches from patient's nostrils to begin with and gradually lowered, as the patient acquires a tolerance, and anesthesia progresses. This method is much to be preferred to the old and, I think, extremely barbarous manner of putting the inhaler immediately over the mouth and nostrils. In putting too near at first it is not only very disagreeable, causing strangling, suffocation, and voluntary stoppage of breathing, but the patient is liable to get it too quickly, thereby producing shock and other unpleasant symptoms at the very outset. Go slow, proceed with caution, take fifteen minutes to get your patient "down," and he will most assuredly take the anesthetic alright. His readiness for operative procedure will be noted by his smooth, regular, and at times stertorous breathing, abolished reflexes, and complete muscular relaxation. He is then wheeled into the operating room. At this juncture he should undoubtedly be profoundly anesthetized. In doing an abdominal section, for instance, should the patient not squirm as the knife severs the skin, fascia, &c., it should be withdrawn for a brief period, as this is a sure sign he is getting too much, because cutting the skin is far more painful than separating and cutting muscular tissue and handling and examining viscera. If at any time during the operation his nose, face, or ears grow cold, or lips purple or livid, remove inhaler immediately. In fact I think the general appearance of face a more valuable index to real condition than palpating pulse or noticing respiration. This facial appearance is really a magnified dial plate, giving conditions of both heart and respirations with unquestionable authenticity. The untoward effects are these: coldness of extremities, cyanosis and lividity, weakened, soft, compressible pulse, shallow, labored, irregular respiration, and dilated pupils. This calls for immediate withdrawal of anesthetic, prompt and heroic measures for resuscitation, such as fresh air in abundance, oxygen, strychnia and brandy glonin by hypodermic, and last, but not least, amyl nitrite, which is of undoubted efficacy in stimulating circulation and respiration, and which should at all times be within reach. All operative interference should be interdicted at this time, and the patient's head lowered so blood will gravitate to anemic brain and medulla. The anesthetic should be kept up until all operation is finished and sutures inserted, then it may be withdrawn, as then there is nothing to do but tie sutures and put on binder; by this time patient is beginning to arouse himself and show signs of returning consciousness. The patient is now put in warm bed and hot water bottles or bags packed around him. If he has had nor morphia before or during operation it is wise to administer hypodermically from ¼ to ⅙ with atropia 1-100 gr. immediately after being put to bed. Given at this juncture, by the time chloroform anesthesia is about passed off and consciousness returning, the patient soon drops off into a sweet refreshing sleep under its magic influence.

To summarize then the points I wish especially to emphasize are (1) give morphia and atropia ½ hour before operation to all cases of plethoria, stout, close built individuals, nervous apprehensive females, and inebriates especially; (2) look to mouth for foreign bodies, for false teeth, &c.; (3) have an empty and as far as possible an aseptic alimentary tract; (4) always have patient in horizontal position, and take at least fifteen minutes to get "patient down," and always begin by holding inhaler eighteen inches from nostrils, with towel over eyes; (5) this is more important than all the rest of technique combined; (6) give amyl nitrite, oxygen, strychnia, artificial

respiration (Sylvester's preferably) in emergencies. Don't move patient any more than necessary as it provokes vomiting; (7) if morphia hasn't been given before or during operation, give it immediately after putting patient in bed. Give from 1/6 to 1/4, depending upon nature and painfulness of operation.

Surgical Intervention in the Treatment of Epilepsy.*

By Stuart McGuire, M. D., Richmond, Va.

My gratification at being asked to read a paper before this Association is mingled with embarrassment at being called on to discuss a subject with which I have had less experience, and to which I have devoted less study, than many of those in my audience. I have nothing new to present, and all I can hope to do is to review the work of others, and to state the conclusions I reach from the standpoint of a general surgeon.

Epilepsy has no constant morbid anatomy, it is apparently due to causes widely differing in character, and its treatment up to this time has been unscientific and unsatisfactory. Until a real knowledge of its pathology and etiology is obtained, and until a proper classification of its different types is formulated, epilepsy should not be considered a disease entity, but rather a symptom complex, the result of not one but of many different conditions.

The victim of epileptic convulsions is not always incurable, and patients should have the benefit of dietetic, hygienic, medicinal and surgical treatment, even though the means employed be empirical. The treatment should be of the patient,—not of epilepsy—an effort to remove the cause rather than to relieve the symptoms. Success can only be secured by a special study of each individual case. It is folly to attempt to make a differential diagnosis between epilepsy, epileptiform convulsions, grand mal and petit mal, with the hope of finding a cure. Success, if success be possible, will only come from painstaking, searching, conscientious and skillful study of the individual affected.

The opinion of the profession in regard to the value of operative intervention in the treatment of epilepsy has changed with almost every decade. At one time it was thought that surgery was destined to cure a large majority of patients, and later it was believed that it only gave temporary benefit in a few selected cases, and that the results obtained did not justify the risks entailed. Neither extreme is right. Surgical operations should only be performed to meet logical indications. Surgery is not a cure-all, but will unquestionably relieve some cases which cannot be cured by other measures.

Operations which have been performed for epilepsy, and which have been followed, according to the report of reliable men, by complete relief of convulsive seizures, vary widely in their nature. In some cases the rationale of the cure can be explained; in others it is merely a matter of conjecture. An operation which leaves an opening in the skull will cure some cases, while one which seals the skull securely will be followed by cure in others. The removal of old cicatrices, especially from the scalp, has been followed by cessation of paroxysms, while in other cases the seizures have continued even after excision of the motor cortex. Resection of the cervical sympathetics, advocated by Jonnesco, has been followed by a cure in many cases, although the operation has recently lost its popularity. Ligation of the longitudinal sinus following accidental rupture was so clearly a cause of cure in one case that the surgeon deliberately and successfully performed the same operation on a second, (Delangeniere). Phlebotomy has been advocated and been followed by relief of seizures, (Houzel) and doubtless during the so-called status epilepticus, such a procedure would be logical. Appendicostomy has been advised by LaPlace in certain selected cases where coprotasis is a prominent factor. The injection of eucaine into the motor cortex has been practiced by White and others, with apparent benefit. Cures have followed the administration of an anesthetic, the removal of necrosed bone, the correction of uterine displacements and the operations of ovarectomy, clitorectomy, trachelorrhaphy, perineorrhaphy, orchidectomy, dilatation and curettage of the uterus, nerve stretching, nerve section, circumcision, cauterization, removal of polypi from the nose, wax from the ear, adenoids from the throat, and section of the muscles of the eye. Finally, trephining or osteoplastic resection of the skull for exploration and the removal of the supposed cause of the convulsions, or of a portion of the motor cortex of the brain, have cured a large number of cases.

A study of the results of operations on epileptics shows, according to DaCosta, that only from four to five per cent. can be cured by surgical measures. This is not as good as it ought to be, but compares favorably with the result of medical treatment, which, according to Spratling, is only successful in relieving from eight to ten per cent. of

*Read before the National Association for the Study of Epilepsy and the Care and Treatment of Epileptics, at its meeting at Richmond, Va., Oct. 24th-25th, 1907.

cases, and that when the patients are treated early, carefully, and kept under proper control.

In estimating the value of surgical statistics, it must be remembered that cases may be definitely cured and then seizures return from an entirely different cause, or indeed, the recurrence may be the effect of a mutilating cerebral operation. This is especially true if the patient is, by heredity or nervous construction, predisposed to epilepsy. Certainly no one can expect operative intervention to give immunity to such a malady. Again it must be borne in mind that an operation which apparently fails at the time may ultimately result in a complete cure. Bullard, Putnam and Codman report cases which did not show decided improvement until the lapse of months or even years. Finally, we must not forget that many cases which are not cured are markedly improved, and that operations which are technically a failure are often of great value to the patient.

As a matter of fact, the results of the past and the possibilities of the future justify an active renewal of surgical interest in epilepsy. Because all cases cannot be cured is no reason to neglect those cases that are amenable to operative treatment. Cancer of the breast does not yield a high percentage of permanent cures, yet no one questions the fact that it is a proper field for surgical endeavor.

During the past we have certainly blundered. In spite of the fact that everyone knows that epileptiform convulsions are not always due to brain disease, there seems to be an instinctive inclination on the part of physicians and surgeons the world over, to begin the attempt to cure the affection by an attack with either drugs or a surgical operation upon the cerebral cortex. Trustworthy clinicians have demonstrated that convulsions may be due to affections involving other organs than the brain or spinal cord, and the relation of distant lesions to epilepsy must not be ignored. Brown-Sequard produced epilepsy in a guinea pig by injuring the sciatic nerve, and there is on record a large number of analogous cases in man. Whether or not there is any such thing as reflex epilepsy, the fact remains that in certain cases the removal of some source of irritation will be followed by relief of symptoms. In most cases the source of irritation has been of traumatic origin and located in highly organized tissue, endowed with abundant sensory or sympathetic nerve supply. The same mistake of treating symptoms rather than the cause has only recently been recognized, and is not yet entirely corrected, in the management of disturbances of digestion. For a long time the stomach has been subjected to much harsh and ineffectual treatment. It is now known that many of its disorders are due to reflex irritation from the appendix, gall bladder, liver, heart, kidneys and other organs. Just as some cases of dyspepsia cannot be cured by treating the stomach, but must be relieved by the removal of a source of reflex irritation, so some cases of epilepsy cannot be cured by operations on the brain, but must be relieved by the correction of distant, and frequently unsuspected, causes of irritation.

In deciding, therefore, on the line of treatment most likely to relieve a victim of epilepsy, the conclusion must be reached only after a painstaking study of the individual patient. An accurate history of the sufferer's previous life, of his diseases and accidents, of his hereditary tendencies, and of the exact character of his convulsive seizures, must be secured. A comprehensive and detailed examination of every organ and function of his body should be made, and, if necessary, competent specialists called into consultation. Any abnormality which might prove a source of real irritation should be removed. If this does not relieve the epilepsy, it will at least improve the patient's general condition, and a cerebral operation can be done later.

Excluding intra-cranial conditions, the most frequent seats of pathologic conditions which cause epilepsy are the generative organs, the organs of special sense, and the large peripheral nerves. I have, in my personal experience, noted twelve cases where there was immediate and permanent cessation of epileptiform convulsions after radical operations for disease of the uterus and adnexa. Spratling states that many cures have been effected at Sonyea by abdominal operations on women. Goodell, years ago, stated that in many women, womb disease existed only in the brain, and it is not surprising to find that their cranial brain is often dominated by the "pelvic brain" of Byron Robinson.

Results of operations on the digestive organs are not so striking. I have had one cure of apparent epilepsy to follow the removal of an inflamed appendix. LaPlace reports three cures after appendicostomy for chronic disease of the bowel. Other writers record cures after operations for hemorrhoids, gall stones and other affections of the bile tract. Operations on the eye, ear, and nose have all been occasionally followed by good results. Eye strains should always be corrected. Disease of the ear, if present, should be treated, and polypi or other growths in the nose or throat removed.

Finally, after all possible extra-cranial causes are removed, if the seizures continue,

an operation on the brain itself may be indicated. In these cases lie the danger of indiscriminate, imperfect and illogical operations. Every cerebral operation for epilepsy is more or less exploratory, and can only properly be done by the removal of a large osteoplastic flap. The old trephine for this purpose is an obsolete instrument, and the Stellwagen trephine or DeVilbliss' bone forceps should be used rather than subject the patient to the traumatism inflicted by the chisel and mallet. If a local focus can be found it should be removed, as in twenty per cent. of cases a permanent cure has resulted. If adhesions are found they should be separated, as Starr reports many cases relieved by this method for from one to three years.

In focal epilepsy, with or without skull injury, a cerebral operation is indicated. The dura should be opened and the brain examined by sight and touch over the area exposed. Tumors should be removed; cicatrices should be excised; cysts should be drained; and any obviously diseased area in the brain tissue should be extirpated. If there is special increase of intra-cranial pressure, the cause of which is not removable, decompression is indicated and may result in cure. If nothing obvious is found, and if the attacks have been distinctly focal in origin, it is justifiable to excise the motor center from which the discharge seems to originate. In doing this the Faradic test should always be used. Excision of the motor center, however, is useless in cases of general epilepsy, and, as has been shown by Mills, in some cases where the Jacksonian symptoms are merely a part of general epilepsy.

When Jacksonian epilepsy has followed an injury in the motor region, the chances of cure are obviously better than when the sensory area has been the seat of injury. Dercum, however, has reported one case in which Keen effected a complete cure by removing a lesion of the frontal lobe.

Friederich reports eleven cases of idiopathic epilepsy, all in men from seventeen to thirty years of age, operated upon after a duration of the symptoms of from four to twenty-five years. The results were great benefit in all cases, practically amounting to a complete cure in three. He differs with Von Bergman in the belief that operations should not be performed in long-standing cases, and proves that many of even these may be sirikingly benefited if not cured, by operative treatment.

In summing up the results reported from the Boston Hospital by Bullard, Putnam and Codman, we find that in thirty-nine cases fifty-one per cent. were benefited and forty-nine per cent. were not appreciably relieved. This is certainly encouraging, especially when it is considered that many of the cases were operated upon before the development of the modern technique of brain surgery.

The conclusions I reach from my recent study of epilepsy are:

1st. Epilepsy is a symptom, not a disease.

2nd. Treatment should be directed to the cause, not to the result.

3rd. Success depends on the individualization of the patient and a careful study of the various functions of the body.

4th. When symptoms are not clearly due to lesion or disease of the brain, the surgeon's first effort should be to remove all extra-cranial sources of irritation.

5th. If after this is done the seizures continue, an exploratory operation on the brain must be considered.

6th. In cases where there has been injury to the head or where the symptoms are focal, an operation on the brain is indicated.

7th. All cranial operations for epilepsy are exploratory—a large osteoplastic flap should be lifted and conscientious and skillful search made for the lesion.

8th. Gross intra-cranial lesions should be removed, excessive intra-cranial pressure relieved, and finally, if no lesion is discovered and excessive intra-cranial pressure does not exist, if the epilepsy is focal in origin, the entire motor cortex should be excised after being carefully isolated by means of faradization.

9th. Statistics of the result of surgical intervention in epilepsy contained in most books embrace illogical operations, imperfectly performed with obsolete instruments, before the development of modern technique, and do not represent the prospect which can now be offered to the patient.

Epilepsy Resulting from Sexual Excesses.

By Linton D. Landrum, M. D., Columbus, Miss.

Epilepsy resulting from sexual excess, though in its outward manifestation much the same as the ordinary neuropathic form, yet in its essential nature there is a difference.

(1) Neuropathic epilepsy is generally caused by some irritation to the nerves, or nervous system, existing either in the circulation, pressure on a nerve, or it may be congenital, born in the subject thereof. But whatever may be its source, this character of epilepsy is caused by some irritation of

(1) Eclampsia is not included in what is here stated, (2) Mr. Bartholow is certainly mistaken in saying "That sexual excesses are more frequently the result than the cause of epilepsy, as sexual excess in the insane is by no means confined to the epileptic inmates of an asylum.

the nervous system, which irritation manifests itself in periodic explosions of nervous energy.

(2) Whereas epilepsy caused by sexual excess is due to congestion of the brain, including the *medulla oblonggatta* and spinal cord, with blood.

Which congestion is a fixed condition, except as it may be constantly increased by the continuous and progressively increasing continuance of the sexual excess.

The appearance of a person threatened with this character of epilepsy is characteristic.

His face has somewhat the appearance of an habitual user of whiskey to excess, only there is no special redness of the nose.

Under the eyes there is heavy dark coloring of the skin, as if the extravasated blood were stagnant, and there is a general appearance of a red plethoric fullness about the upper part of the face.

Another thing—but this attends sexual excess generally—the back of the neck is wasted away, as if the patient had just recovered from a long spell of typhoid fever.

Take this case: Mr. A., a wealthy planter, with his wife resided in the village, or city, whilst his large and fertile plantation was some miles in the country. This gentleman and his wife had son—their only child. This was a fine, noble young man, and at the time of the occurrences hereinafter related had just graduated at the State University and come home.

There resided in this village, a square or two from the first named family, a vigorous, buxom, handsome young lady. This young lady had evidently become enamored of this young man, so that she suddenly manifested a great liking for the mother of the young man. She would make frequent calls on the elderly woman, carrying her flowers, etc., and was disposed to be quite domestic, assisting in various matters about the house. She would frequently tarry so late at the young man's home as to be invited to remain to tea. After tea, the four would frequently, and on the young lady's suggestion generally, engage in a four-handed game of cards. Whilst the other three were absorbed in the game of cards the young woman would rub her legs up against the young man's, and became slyly more demonstrative.

He had never had sexual relations with women, but up to this time was strictly virtuous. But these continued advances on him by the young woman so excited his sexual nature and inflamed his passions that finally on retiring to his room for the night he began to practice masturbation. And this being a new experience to him he indulged in the vice to a most inordinate extent. After some time his condition attracted the attention of his parents, and they carried him first to one physician and another, but all without any avail. By the time he was placed on the correct plan of treatment he was afflicted with incipient epilepsy.

When he was brought before the physician he presented the condition described *supra*. His face was tinged with blood, especially the upper portion, black streaks under his eyes, with his neck wasted away, etc.

The first object in the treatment was to relieve the engorged condition of the brain and spinal column.

It was useless to talk of a cure until this was done. So the young man was given menobromide of camphor, alternating with bromide of potassium. This treatment was continued until the engorgement above mentioned of the brain and spinal column was relieved.

When this engorgement of the brain and spinal column passed off—or was relieved—all disposition to indulge the vice also ceased—the threatening epileptic condition likewise gradually passed away.

These strong brain deterrents must not be continued too long. Because if continued too great a while they deplete the brain further than necessary, thus leaving it in a sensitive condition, deprived of its normal support and nutriment, the consequence of which, in this class of patients, is they are liable to get in a condition resembling *mavio patu*—that is they get flighty—sometimes wild—but with no disposition to convulsions. Should this occur by stopping the medicine the brain soon resumes its normal healthy condition.

After all epileptic symptoms have passed off it is still best to give for some time a mild anaprodisiac. But just so soon as the patient can be safely trusted with the management of his sexual proclivities he should marry.

In the case mentioned the patient having been thoroughly relieved of his incipient epilepsy, and his disgracing habit broken up, he was advised to marry. He followed this advice, and is now happily married.

Sexual excess manifests itself in different persons differently. In some there is a general weakening of the nervous power until finally the patient sinks into a semi-dementia. But in those with strong nervous systems, especially if there be the slightest tendency to a neurotic condition, the result is epilepsy.

The engorgement of the brain and spinal column not only acts as an irritant to the nerves, causing an increased indulgence in

the vice, but it also acts as a foreign substance would, thus causing convulsions, so that relief of the blood pressure relieves the whole man.

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Collapse.

By M. B. Tuller, M. D., Gibbs, Kentucky.

Premising with the statement that individualization should be the first law of treatment in any given case, I ask the consideration of the following case by the readers of this journal.

H. H., aged 45, farmer, a rather tall, gaunt, muscular man was seized at one o'clock on Monday morning with a state of profound collapse. His face is pale and sunken and covered with cold moisture; the under jaw has dropped; mouth open and eyes half closed; respiration shallow; radial pulse gone; carotid pulsation barely perceptible, and heart's pulsation scarcely audible, and the skin is covered to the feet with a cold dampness. He is lying on his back, immovable, and is the picture of impending dissolution.

He had been doing jury service at court for nearly two weeks, and having been dismissed from his duties there on the Friday preceding his present attack, had walked to his home, a distance of 22 miles, on a hot August afternoon. Since he came home has complained of not feeling very well and has lain around the house and in the shade in the yard; has eaten very sparingly and had a slight looseness of the bowels. He is a sober man and very industrious, and an inordinate and excessive tobacco chewer. The harder he works the harder his jaws work at their favorite pastime.

Now what is to be done to save this man's life? On the face of things diffusible stimulants, strychnine, heat to the surface and friction are all called for, and all would probably be more or less useful.

Strychnine sulphate in doses varying from gr. 1-60 to 1-20 hypodermically, repeated at frequent intervals until the pulse fills and becomes stronger, is indicated in impending collapse of pneumonia, typhoid fever and other acute diseases. In that caused by fright in which the heart seems to almost stop beating, and the subject faints or appears likely to do so, strychnine hypodermically will be found to act efficiently. The drug acts as a powerful tonic to cerebro-spinal centers and would be possibly useful in this case, enough perhaps to save his life, but I shall dismiss it as not having ability in itself to effect a cure. Strange as it may seem aconite is a useful remedy in states of partial collapse, especially when there are cardiac lesions, which result from slight scares, and the patient is in a state of nervous fear that she is going to die. But none of these conditions obtain here and further consideration of the drug is dismissed.

Nitro-glycerine is another drug adapted to states of collapse which is frequently effectually used in those cases occurring in the course of an acute disease, and, acting as a heart stimulant, would possibly have a favorable effect on this man, but it will share the fate of strychnine for the same reason.

Very many practicians would administer camphor in greater or less dosage, and it is specifically indicated by two prominent symptoms, viz: The cold, damp surface and the fact that the state was preceded by a mild diarrhœa; moreover, it is a powerful stimulant, and probably would benefit the case to some degree, but will be dismissed as inadequate.

Ammonium carbonate, a powerful cardiac stimulant, would perhaps benefit the patient to that extent, and enable him to tide over the grave prostration and ultimately recovery would ensue, but, if possible, a more direct result must be obtained.

Ergot is another drug well adapted to shock and collapse of a certain type, but the ergot ease does not have absolute pulse lessness and almost total heart failure that is present here. In other words, it does not affect the nerve centers as profoundly as must the remedy which we will select.

Alcohol, a diffusible stimulant of value in certain conditions, is too transient in its effect for so profound a state, and therefore will be dismissed.

External heat and friction are mainly useful in quieting the family.

The diagnosis is collapse from indigestion, probably due to an excess of nicotine in the system.

Whatever remedy is now chosen must cover two vital points in this man's case: 1st. It must be antidotal to the probable cause, excess of nicotine, and, 2nd, it must be both a respiratory and cardiac stimulant. Belladonna is the remedy. It is indicated, 1st, by the probable cause; 2nd, by the state of the heart and respiration; 3rd, by the condition of the skin. If this case be curable belladonna will cure him. Of all the drugs in the materia medica with which I am acquainted none is so surely antidotal to tobacco poisoning. The dosage must be sufficiently large to establish symptoms of its own. In this case it must of necessity be very large because the man is at death's door, and reaction must be speedy, even at the risk of exciting delirium. We may administer the alkaloid atropine or the tr. or F. E. In this case, as the tincture is liquid, it will be surer than the alkaloid and safer than the F. E.

We may administer the alkaloid hypodermically or the tincture by the mouth. As there is practically no circulation we will probably get quicker results from the tincture by the mouth and stomach. Accordingly his tongue was pulled out and 40 drops of the tincture were poured into his throat; twenty minutes elapsed without response to the dose given, when 20 drops more were administered; twenty minutes more elapsed without result, when another dose of 20 drops was administered, making 80 drops within a space of 40 minutes. In the course of half an hour the skin began to dry up, and one hour after the last dose a red spot appeared over each malar process. At the end of the second hour the patient was asleep with a very flushed face and a full, quick pulse. The drug was given in 3 to 5 drop doses every 2 to 3 hours until tolerance was established, as was shown by failing blush, when it was discontinued.

He slept most of the time for 24 hours, and awoke at breakfast time on the second morning calling for his coffee.

He was discharged with some instructions as to his habits and some medicine to aid his digestion.

Not many cases will require or bear as heavy dosage as was given this patient. As a rule from 8 to 15 drops repeated as seems necessary until physiological symptoms become manifest will meet all requirements. The almost total failure of the heart in this case made the large dose imperative in order to get effect. While it is possible that smaller doses might have saved his life yet two points in regard thereto impress themselves upon my mind; 1st, the length of time, one hour and ten minutes, after the initial dose before there was evidence of drug action, and, 2nd, the brilliant result which was obtained after the full effect of the drug became apparent.

In the treatment of impending cardiac failure from excess of tobacco the physiological effect of the drug must be plainly apparent, and the tobacco symptoms entirely displaced by those of belladonna before the intervals between doses are greatly lengthened.

One other point I desire to call attention to is that raw-boned, muscular men, especially, will require larger doses in order to get physiological effect from a drug than those having more embonpoint. Such men are rarely sick but when they are they become gravely sick, and the same power which enables them to resist disease invasion must be replaced by the indicated treatment augmented before an equilibrium can be established.

Bony Growths in the Nasal Fossae.

By Richard H. Johnston, M. D., Surgeon and Pathologist to the Presbyterian Eye, Ear and Throat Hospital; Lecturer on Diseases of the Nose and Throat, University of Maryland, Baltimore.

It is not uncommon to find bony growths in the nasal fossae, but we rarely see such formations giving rise to complete atresia of one or both nostrils. It is quite probable that bony atresia like membranous occlusions are congenital in origin. In Archivii Italiani Di Laringologia for July, 1907, Balla has a very interesting article on Congenital Stenosis of the Choanae. He has made a careful review of the literature and gives brief histories of 46 cases reported from time to time. He found 153 cases of stenosis of the choanae, of which number 96 were bony, 29 membranous and 8 mixed. 47 of these were on the right side, 23 on the left and 72 bilateral, while 11 were not recorded.

I have seen one case of bony atresia of the left nostril, and since such congenital formations are rare, it may be of sufficient interest to place on record. The patient was a girl, 17 years old. Beyond having had the diseases incident to childhood, there was nothing of interest in her general history. She had breathed through the mouth since infancy and presented the typical appearance of a mouth breather. Her voice was nasal in character and she complained of constant tinnitus in the left ear. There was no asymmetry of the face. The throat was constantly dry. On anterior rhinoscopy the septum was found deviated to the right, in the left nostril there was seen a grayish obstruction attached to the septum on the inner and apparently obliterating the turbinates on the outer side. To the probe the mass was hard and unyielding. With posterior rhinoscopy the same appearance could be noted in the left naris. The diagnosis was congenital bony atresia of the left nostril. There were no adenoids in the naso-pharynx. The pharynx was dry from the constant mouth breathing. Nearly half the nostril was involved in the bony growth. The patient and her father were told of the nature of the occlusion and that the operation of making a nostril would be difficult with no certainty of success. She expressed herself as willing to staud anything that offered any hope of cure. The operation was attempted under cocaine anaesthesia. After applying 20 per cent. cocaine solution, I proceeded with mallet, chisel and curette to remove the bone, which fortunately proved to be comparatively soft. The patient was allowed frequent rests on account of her nervous condition, so that the operation lasted an hour.

A good sized opening was made into the naso-pharynx and a hard rubber plug introduced to keep the passage clear. The patient collapsed after the operation but soon revived and left the office feeling fairly well. I would not undertake another case without the electric trephine. With such an instrument and the burr to smooth down thy walls, the operation can be done in a few minutes with little shock to the patient. The patient remained in town a week, at the end of which time the plug was removed. She was urged to remain longer but refused to do so. She had an opening through which some air was passing and was certainly in better condition than before.

To illustrate the efficiency of the electric trephine in the removal of bony growths from the nostril, I will cite the following case: The patient was a man, 24 years old, who had never breathed freely through the left nostril. A general practitioner had tried on three different occasions to remove with the saw a large bony growth which completely blocked up the left nostril, posteriorly. The mass did not form a true atresia but gave rise to the same symptoms on account of its large size. It was so hard that the three efforts to remove it with the saw had made practically no impression on it. The trephine was introduced, the current turned on and in a few seconds a large piece was cut out of the growth. Three introductions of the trephine cleared the nose and it only remained to remove a few small pieces to give the patient a normal nostril. The metal protector around the trephine prevented injury of the turbinates so there was no danger of a synechia. The entire procedure did not take five minutes, and there was no pain to the patient.

Of 118 cases of congenital atresia, 47 were observed in males and 71 in females. The age was noted in 114 cases; of these 3 were in foetuses; from birth to 10 years, 18; from 11 to 20, 57; from 21 to 40, 25; after 40 years, 12. The symptoms observed have been: partial or total abolition of nasal respiration, anosmia, increased tactile sensibility of the nasal mucous membrane, ageusia or hypoageusia, hypoacusia and closed rhinolalia. Anosmia is present in many cases and is caused by atrophy of the receiving nerve elements or by a torpor of the same. In the latter case the sense of smell returns when the obstruction is removed. Increased sensibility has been rarely observed. In 153 cases it was reported 10 times. Hypoacusia was noted 15 times in this series, while some degree of deafness was found in 20 cases.

Anatomical modifications of the nose are increase in size or narrowness of the organ; the same changes may be seen in the nostrils. Exophthalmos with strabismus, asthenopia or astigmatism may be seen. Asymmetry of the face was seen in 12 cases, of which 10 were unilateral stenosis and 2 bilateral. The only treatment is of course to remove the bone which obstructs the nostril. In many cases the results of treatment are not given. It is probable that treatment will not result in a permanent cure unless the patient can be kept under observation a long time.

919 North Charles St.

Surgery of Carcinoma.

By Dr. J. D. Bloom, Suite 155, Barronne Street, New Orleans, La.

Two and not quite one-half decades in surgical observation and work privileges an expression, very pertinent to a present day much indulged thought both on the part of the medical profession and laity, that surgical intervention alone is the panacea in carcinomatous, or, I will say, malignant disease. Clinical facts are my only reckoning and the summing up of this observation, not alone the outcome of my own experience, but as well in the hands of others whose opinion and handiwork I respect and admire, causes the question: Do we cure, or are our efforts simply toward a probable Euthanasia? Unmistakably, operative interference is a trauma that increases the lessened tissue resistance: the disease's return or metastasis.

The old method practiced by men distinguished in their day, of making the skin incision and then by force tearing out the diseased organ, had an equal result with the modern day anatomical dissection, and whilst cruel in its doing, was more tangible in theory of arousing tissue resistance.

It would seem that longevity, in the operative interference, is proportioned to removal within bounds of a normal tissue resistance, which in many instances is not perfectly definable, but is within the bounds of judgment and not trauma.

I have in mind a number of cases in which radical procedures were entered into and where rapid return followed: locally, in a visceral organ, or by carcinomatosis, and contrawise, I have several now alive where the most tentative efforts were made and in one of double mammary schirrhus, without ulceration, where no attempt was thought justifiable; that is now seven years since I first examined her. She is apparently well and improved in general health and very active in a capacity that entails great mental and physical effort. This subject must impress one and the spirit of proprietaryism that national law has measured and controlled, must be the just one for well meaning men of our profession. If

we operate, confess the truth, limit the damage, and let us further observe and study lymphatic blood and apposing infiltrating effects that cogently point to a cause that injured or embryonic tissue invites.

Auld Lang Syne.

By H. C. Buck, M. D., Friars Point, Miss.

"Should old acquaintance be forgot and never brought to mind." While "onward and upward" should be the motto of every one, it is well for us to occasionally look back through our past lives that we may judge whether we are moving "onward and upward" or backward and downward, for there is no standing still, we *must* go forward or we *will* go backward.

During the thirty-five years I have been in the practice there have been many and wonderful changes; the old time practice of medicine like the "old time religion" has been relegated to the past and we are living in a more advanced age and have adopted the advanced theories and practice in accordance with the ideas and wonderful knowledge acquired in the professional and scientific world within the last quarter of a century.

In my young days it was a custom among the churches, in the rural districts, when preparing for a protracted meeting, or "revival" as it was then called, to scatter a quantity of straw on the floor in front of the pulpit in order that the penitent sinner could more comfortably wrestle with sin and break away from the dominion of the evil one, or "get religion," as it was then called.

In those days the pocket lancet was as necessary a part of the equipment of the "doctor" as is the fever thermometer and hypodermic syringe of the present era. When I was young we neither knew nor cared about the temperature of the sick, but based our diagnosis and prognosis on the pulse in conjunction with other symptoms. I well remember my first experience with the thermometer. I had a case of pneumonia near where a party of gentlemen from Nashville, Tenn., were "camped" on a hunting and fishing trip. In the party was Dr. Madden, a fine physician and perfect gentleman. I went by the camp and asked the doctor to go with me to see my patient. When we got to the house (a log cabin) the doctor took out his thermometer, put it in the man's mouth, and after awhile took it out, looked at it and put it in his pocket. That was all the examination he made. I asked him if he was through. He said he was. I then asked the man as to his rest during the night, his cough, &c., after which the doctor and I took a walk. I told him what my treatment had been clear through the case. He remarked, "Doctor, your treatment is admirable, all any one could have done, but your patient is going to die." I said, why his pulse is better, so is his expectoration and general appearance. He said, "Doctor, his temperature is 106 and he is going to die." I told him I didn't care a d—n about his temperature I was sure he would get well. The doctor smiled. My patient died that night and I had the satisfaction of knowing I had made an ass of myself. I sent at once and got me a thermometer, for which I paid $3.00, and for sometime when I found a patient with a temperature over 102 I was scared ha'f out of my wits, but I have since seen some very high temperatures recover, one child I remember had a temperature of 108 and recovered.

Puerperal eclampsia was nearly always fatal. The treatment advised by authorities was to bleed to the point of syncope and make forcible delivery under an anesthetic. I had been practicing a good many years before Norwood's tinct. was recommended for this trouble.

Antiseptics were unknown, although we did use carbolic acid as a dressing for wounds. Disease germs and microbes were not discovered. About the only microbe we knew was what our colored friends call "maggits." Intestinal antiseptics were unknown, that is by the "one horse" country doctor. In looking over some old notes of cases, I see where I treated a very severe case of dysentery (in 1971) with opium almost exclusively. My notes say the patient recovered, but *why* he did, I am now at a loss to say.

In "ye olden times" the buggy was such an expensive luxury that only the "plug hat and gold headed cane" city doctor could afford to own them. The doctors in the small towns and country visited their patients on horse-back and carried the old fashioned saddle bags. Now our city brother has discarded his buggy and rides in an "auto" while we little fellows have discarded our saddles (except when the roads are bad) and go in buggies. Perhaps in twenty-five years from now we will use an "auto" while our city brother will use his "air ship." In the days I speak of the telephone, electric car and automobile were unheard of, and had we seen one we would have exclaimed, as did the man from China, "No pushee, no pullee, run like hellee."

In a work by Dunglison, published in 1842, mention is made of appendicitis, yet in my earlier years the appendicitis doctor had not put in an appearance, and the disease had not become so fashionable. A few years ago I had a negro patient with appen-

dicitis which proved fatal. A gentleman asked me what was the matter with the negro. When I told him, he said, "Served him right for trying to be so aristocratic." When I began the practice of medicine the transfusion of blood and skin grafting were just coming into notice. The injection of saline solution nor X-ray had been discovered. Morphine was about the only drug used hypodermically, and we had to prepare our own solution, as the convenient little tablets had not come in use. True we occasionally read in the journals of some noted physician using quinine and other drugs hypodermically, just as we now read of some one taking a few stitches in a fellows heart, but the general practician did not use them for many years after I entered the profession. At that time abdominal surgery was in its infancy and nearly all wounds of the intestines were fatal.

But why try to enumerate all the wonderful discoveries made in our profession in the last twenty-five years. Truly we live in a most wonderful age, and judging from the many wonderful discoveries being made nearly every day we are forced to believe "the half has not been told." In thirty years from now things that now seem marvelous will perhaps be laid aside to be replaced by still greater wonders.

In view of all the wonderful discoveries and improvements made in the practice of medicine one would naturally suppose the percentage of recoveries would be vastly increased and that it would be rather difficult for a man to die now. But is this true? Is not the percentage of deaths as great now as it was twenty-five years ago, if we accept the terrible epidemics of yellow fever we have had?

Eye Ailments Due to Extra-Ocular Diseases.*

By Clarence Porter Jones, M. D., Newport News, Virginia; President Newport News Medical Society; member several State and National Societies; consulting Oculist and Aurist to several Hospitals, &c., &c.

By the term "eye ailments" used above in the title I intend to mean disease or disturbance of other than organic nature.

To my knowledge of medical literature, there is practically nothing written on this subject. But reversing the title we are deluged with writings, as is apparent to us all.

The question of the eye being affected by reflexes from disease in other organs seems to be an undeveloped field. I have made a careful study of the subject, and in presentation of a few cases briefly to you, I hope to be able to prove my assertion.

*Read before the Medical Society of Chase City, Virginia.

We know the superior division of the fifth nerve unites through Meckel's ganglion with the seventh, ninth and tenth; also by direct union with the motor oculi becomes the common parent of the ciliary ganglion and nerves. By union of all the above freely with the sympathetic, we have a most suitable system of routes for the passage of all sorts of vicarious reflex impulse.

Familiar to us all is the congestion of the conjunctiva when there is an acute rhinitis or "cold in the head"; and on the contrary sneezing often results from looking at the sun,—both examples of reflex vaso-motor disturbance. All of us know how easily the eyes tire when the nose is stopped.

My case reports will better illustrate the facts:

CASE I.—Dull pain in eyes, increased tension, due to engorgement of the liver.

Mrs. V. H., aged 51, health good till two weeks ago. Pain severe constantly in eyes and orbit. Vision normal, nothing wrong with eyes but increased tension. Liver engorged. Calomel, blue mass and hyoscyamus given. In two days the pain was all gone. There has been no recurrence since this attack, which was over a year ago.

CASE II.—Paralysis of the external rectus muscle, and partial paralysis of the opposite side due to adenoids.

Lora D., aged 6, was to see me in March, 1906, with the above symptoms Under atropine I found a very slight refractive error; not enough to account for the squint, which I was informed was of recent occurrence, likewise the facial paralysis. A thorough removal of her adenoids resulted in a prompt cure of her squint and facial paralysis. Her eye and face are straight at this writing. No other treatment was given.

CASE III.—Injected conjunctiva of left eye, due to hypertrophied middle turbinated bone.

Miss Vana D., aged 23 was to see me in January, 1906, complaining in her own words of "just a red eye." The left eye was so intensely red as to be very disfiguring. The right was normal. She complained of no pain or discomfort whatever. A careful examination showed no refractive error. In the nose I found the left middle turbinate enlarged and pressing against the septum. The turbinate being removed with the cold wire snare the redness disappeared, which did not return.

CASE IV.—Pain in right eye and orbit, due to empyema of right antrum of Highmore.

Mrs. Ella M., aged 31, was to see me in April, 1904. Her only symptom was pain in the orbital cavity, of sixty days duration.

She was forced to take morphine constantly to obtain rest. Her dentist had sacrificed several of her teeth; her physician had tried the various electrical treatments without benefit. Two weeks before I saw her an oculist enucleated the eye. His statement was that it was normal in appearance; not even much visual disturbance. The ball was cut open and nothing found abnormal. The pain remained just the same in the orbital cavity. I opened the right antrum of Highmore, it contained pus and granulations. The normal opening was occluded, pressure was great. After curetting thoroughly the pain disappeared, healing taking place in two months. The trouble has not returned. She is in good health at this time.

CASE V.—Pain in eyes; also excessive lachrymation.

Mrs. C., aged 29, consulted me in December, 1902, complaining of the above symptoms, said she was worse during damp weather. A spur was found in the left side of the nose pressing on the inferior turbinate. I removed the spur with the result of complete cure of the pain and lachrymation. The cure is permanent.

CASE VI.—Pseudo-glaucoma due to urethral stricture.

John S., aged 53, came to see me in October, 1906, bringing a letter from a prominent Philadelphia oculist telling me the patient had glaucoma of the chronic variety, advising an iridectomy on both eyes. The patient being unable to stay in Philadelphia. I found on examination his vision to be nearly normal, no cupping of the disks, despite the fact that he had suffered three years. The misleading symptoms being pain and pulse tension. I sent him to his family doctor for a thorough examination, asking the doctor to look very carefully for some reflex trouble. He found a tight stricture of the urethra located at the internal meatus. He cured this by dilatation. At the end of forty-eight hours the eye symptoms had disappeared. He has been well ever since. This patient had been treated by numerous doctors, druggists and charlitans for his eye-pains.

A fact to be remembered is the unquestionable result of these cases. All having been treated more than one year ago; also that each case has been under my observation since treatment.

In conclusion I will say:

1. That the eye is not the only sinning organ as some would have us believe, but is often sinned against, and has to bear the stigma.

2. That eye disturbance due to extra-ocular disease through the reflexes is for a time functional; but later on it becomes organic.

3. That in treating patients for eye troubles, especially when examining for glasses, other sources of reflex disturbance should be sought for.

4. That it is the proper procedure for the family doctor to join with the specialist in examining the patient when there is the slightest doubt in the minds of either as to the probable cause of the disturbance. And at all times a most thorough confidence and fair exchange of ideas between the two. The patient is honestly entitled to this.

118 Thirty Second Street.

The Diagnosis and Treatment of False Diabetes.

LeLeaupin (Journal de medecine et de chirurgie pratique) recommends that practitioners should not be satisfied with a single examination in order to affirm the existence of diabetes mellitus. Alimentary glycosuria may occur in numerous people, without polydipsia, without polyphagia, and without polyuria, and without any organic lesion. The urine remains normal in quantity, and in density. Its acidity is greater, and the proportion of sugar small. The diagnosis is of importance, especially in young persons with joint affections, since the prognosis has not the gravity of that of a true diabetes. The severely rigid, classical diet of true diabetes is necessary in these patients; especially, the hydrocarbons are not excluded, because these aliments are indispensable to life. If the glycosuria is grafted on an arthitic diathesis it is necessary to be very careful to avoid a meat diet. The alkalies should be the basis of the medicinal treatment. If there is a nitrogenous diabetes, arsenic gives the best results. In digestive diabetes, a meat diet should be allowed, and starches should be replaced, as much as possible, by fats. This form occurs particularly among women who indulge freely in pastry, chocolate, etc.; it is very difficult to make the patients change their habits because food is poorly digested. In nervous glycosuria, the potassium bromide, the antispasmodics, and narcotics are prescribed.

At the recent meeting of the third district Medical Society of Arkansas at Helena, the following officers were elected: President, Dr. E. D. McKnight of Brinkley; Secretary, Dr. H. H. Rightor of Helena; Treasurer, Dr. R. L. Saxon of Holly Grove. The next meeting of the society will be held at Forrest City in November, 1908.

Charlotte Medical Journal

EDWARD C. REGISTER, M. D., Editor.

No. 36 South Tryon Street, - - - -

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MECKLENBURG COUNTY MEDICAL SOCIETY.

At the regular bi-monthly meeting of the Mecklenburg County Medical Society, Dec. 3, 1907, the following were elected officers for the ensuing year: President, Dr. C. A. Misenheimer; first Vice-President, Dr. G. W. Pressly; second Vice-President, Dr. P. M. King; third Vice-President, Dr. Chas. Walker; Secretary and Treasurer, Dr. Robt. Lafferty; Delegates to the State Society, Drs. E. C. Register and J. P. Munroe, alternates, Drs. S. M. Heuderson and T. F. Costner.

BRAWLEY-BOYDEN.

On the evening of Wednesday, Oct. 23, at St. Luke's Episcopal church, Salisbury, N. C., Dr. Robert Vance Brawley was married to Miss May Wheat, daughter of Mr. and Mrs. A. H. Boyden. After the ceremony at the church an elaborate reception was tendered the bride and groom by the bride's parents. The couple left on a late train for the North where they will spend their honeymoon. Dr. Brawley is well known to the profession of the whole State. He is a native of Iredell county, but for several years he has engaged in the practice of his specialty at Salisbury where he has won an enviable reputation.

The bride, a daughter of Mr. and Mrs. A. H. Boyden, is a universal favorite throughout the whole State. Beauty, grace, and cleverness are hers by right and inheritance.

Leaving unsaid the usual commonplace platitudes employed for such occasions, the Journal wishes for the young doctor and his bride all the fullness of an overflowing cup of happiness, all the good things they may deserve.

THE AMERICAN NATIONAL RED CROSS

We print herewith the resolutions adopted by the Executive Committee of the American National Red Cross, Oct. 18, 1907.

Whereas, By international agreement in the Treaty of Geneva, 1864, and the revised Treaty of Geneva, 1906, "the emblem of the Red Cross on a white ground and the words Red Cross or Geneva Cross" were adopted to designate the personnel protected by this Convention, and

Whereas, The Treaty further provides (Article 23) that "the emblem of the Red Cross on a white ground and the words Red Cross or Geneva Cross can only be used whether in time of peace or war, to protect or designate sanitary formations and establishments, the personnel and material protected by this Convention," and

Whereas, The American National Red Cross comes under the regulations of this Treaty according to Article 10, "volunteer aid societies, duly recognized and authorized by their respective Governments," such recognition and authority having been conferred upon the American National Red Cross in the charter granted by Congress January 5, 1905, Sec. 2, "The corporation hereby created is designated as the organization which is authorized to act in matters of relief under said Treaty," and, furthermore,

Whereas, In the Revised Treaty of Geneva, 1906, in Article 27, it is provided that "the signatory powers whose legislation should not now be adequate, engage to take or recommend to their legislatures such measures as may be necessary to prevent the use by private persons or by societies other than those upon which this Convention confers the right thereto of the emblem or name of the Red Cross or Geneva Cross."

Be it Resolved, That the Executive Committee of the American National Red Cross requests that all hospitals, health departments and like institutions kindly desist from the use of the Red Cross created for the special purpose mentioned above, and suggests that for it should be substituted some other insignia, such as a green St. Andrew's Cross on a white ground, to be named the "Hospital Cross," and used to designate all hospitals (save such as are under the Medical Departments of the Army and Navy and the authorized volunteer aid society of the Government), all health departments and like institutions, and, further,

Be it Resolved, That the Executive Committee of the American National Red Cross likewise requests that all individuals or business firms and corporations who employ the Geneva Red Cross for business purposes, kindly desist from such use, gradually withdrawing its employment and substituting some other distinguishing mark.

It is a duty assumed by this country, in agreement with all the great powers, to protect the Red Cross name and insignia from indiscriminate use as trademarks, &c., by business houses and manufacturers. No organization the world has ever seen has done more for humanity's sake than has the National Red Cross, and the name should remain purely distinctive. The demand presented in these resolutions is therefore legitimate and reasonable, all the more so when it is realized that the use of the name and insignia can be gradually dis-

continued within the next three or four years. In conformity with the provisions of the Treaty the prohibition of their use should be enforced not later than five years after the Treaty went into effect.

The Red Cross needs no advertising, its usefulness and its aim lies quite beyond that. We therefore add our voice to the general demand of the medical press and to the crusade promoted by the Association itself that the name, Red Cross, be kept separate and apart.

THE OXFORD ORPHAN ASYLUM.

Among the charitable institutions of our State none are doing a greater work for the good of the young than the Oxford Orphan Asylum. Its purpose is deserving of the highest commendation. It provides a home and proper care and training for homeless children, giving the physical necessities for them, together with the advantages of an English education and industrial training. According to the records, twenty-four hundred and fifty children have been admitted to this institution during the thirty-five years of its existence. At present three hundred and twenty girls and boys are being cared for and taught. The lives of Christian service of many of the children who formerly were trained here are now, and will continue to be, an immeasurable blessing to the world. In this fact there is proof that many have been saved to God and lives of usefulness. No labor can be richer in results in the world of today and tomorrow than wise and loving labor with the children of today.

The Oxford Asylum was established in 1872 by the Grand Lodge of Masons of North Carolina, under a resolution offered by the great pioneer orphans' home worker, John H. Mills, who was the first Superintendent of the Asylum. Although established and maintained by the Masonic Order the benefits of the institution are not and never have been restricted to the children of Masons alone. The conditions of admission of the white children of the State are: that they are really destitute and homeless; that they are sound of mind and body; that they are not under six years of age.

The needs of the institution are many. Constantly increasing demands are being made upon it; its field of usefulness is widening. Funds are therefore necessary. The people of the State cannot fail to respond to the call for help. The Journal offers its voice to urge these needs upon its readers. One of the greatest expressions of love and service is the generous response to the call to help a worthy charity. We can all do something.

THE AMERICAN PUBLIC HEALTH ASSOCIATION.

It gives us pleasure to quote from the report of Dr. Lewis in the Bulletin of the North Carolina Board of Health on the recent meeting of the American Public Health Association, at Atlantic City, Sept. 30th to Oct. 4th. Because we have great faith in the purpose and the actual good accomplished by this body, and especially because of the election of the Secretary of the North Carolina Board of Health to the Presidency of this Association, a fact to which we called attention in our last issue, we are glad to lend a hand toward promoting its welfare.

According to the report, the meeting "was well attended and was quite interesting and successful. Decided progress was made in the organization of a Section on Vital Statistics, with a full program of valuable papers. Steps were taken looking to the organization at the next meeting of a Section on Municipal Sanitation. When this is perfected there will be three Sections, the Laboratory Section having been in existence several years. Laboratory work has become so important in the solution of sanitary questions and in the practical administration of preventive medicine that the great value of this Section, in which the workers in laboratories of hygiene can discuss their special problems and advise together as to the best methods, is apparent. At the general session a large number of papers on a variety of subjects germane to the general cause were read and discussed.

"The American Public Health Association is the oldest, largest and most influential organization for the promotion of the public health on the continent. It is an international society, embracing the United States, the Dominion of Canada and the Republics of Mexico and Cuba. Its membership is cosmopolitan, not only as to nationality, but also as to calling, its roll including health officers, Federal, State and municipal; members of boards of health; delegates from the Marine Hospital Service, the Army and the Navy; sanitary engineers; biologists; statisticians; physicians and public-spirited laymen interested in the great work for humanity, which is its object. One hundred and seven new members were enrolled at Atlantic City.

The Association was very hospitably and acceptably entertained by the local authorities and by the Sanitary Association of New Jersey, which met with us one day.

The next meeting will be held at Winnipeg, the flourishing capital of the province of Manitoba, Canada, sometime in August, 1908."

GALL STONES.

Varying have been the ideas that, at succeeding periods of history, have prevailed as to the mode of formation of gall stones. According to Galen they were formed by coagulation of the bile, due to an increase in the temperature of the liver, an idea which persisted for a long time. Paracelsus thought that disturbances of digestion produce an acidulation of the blood, the acids thus formed acting on the bile and precipitating concretions. This idea has been prevalent in not very remote years as evidenced in the view held by certain writers that, as a result of fasting or an exclusive meat diet, the bile becomes acid, thus producing decomposition of the alkaline carbonates which permits a precipitation of cholesterin and bilirubin-calcium. In the eighteenth century it was believed that one or another normal constituent of the bile accumulated in abnormal amount and that a precipitation therefore occurred.

Flint's theory was that excessive nervous work and cerebral activity brought about a condition of cholesteraemia, or, in other words, gall stones were formed as soon as abnormal quantities of cholesterin were poured into the blood. Thenard believed that a precipitation of bile pigments occurred as soon as the percentage of sodium salts in the bile was reduced.

Looking backward from our present vantage point, it is realized that light did not begin to pierce the darkness until Hemsbach called attention to the role of chronic catarrh of the mucous membrane of the gall bladder and bile passages and, carrying out the theory of Morgagni, expressed his belief that such a condition is responsible for the formation of gall stones. According to Hein gall-stones were formed around plugs of mucus which was the result of a diseased mucous membrane. Seifert finding epithelial cells in the calculi believed they play an important part in the formation of gall stones. Boerhave held to the view that concretions occurred as a result of dessication of bile.

It remained, however, for Naunyn and his followers working on the old theory enunciated by Hemsbach to establish our present day knowledge of the subject. It is believed by Naunyn that all that is needed for the formation of a gall stone is a centre of crystallization. Mucus, and particles of pigment, are not sufficient, for it is found that small particles of cholesterin, bilirubin-calcium, &c., placed in the gall bladder of a dog, after the cystic duct has been ligated, are absorbed without the formation of concretions, and epithelial cells are constantly being desquamated from the mucous membrane in every gall bladder.

Biliary calculi form around masses of *myelin* liberated from desquamated epithelial cells which have undergone fatty changes, or around brownish *lumps* which are composed chiefly of cholesterin, bilirubin-calcium, and fat, the lumps just named being frequently found in human bile. Thus is furnished a centre of crystallization—the cholesterin formed in either way above named does crystallize and in this way a beginning is made. These predecessors, as they may be termed, of gall-stones may be poured out in the bile and doubtless many of them are, but around those remaining, new layers are formed and in this manner the stones continue to grow. Cholesterin is deposited over these minute concretions and penetrates into and through the little stones, so that they are thoroughly infiltrated. The cholesterin then crystallizes. The different layers thus formed consist either of pure white cholesterin or of cholesterin mixed with bilirubin or biliverdin-calcium, the latter being colored. Pure white cholesterin is deposited in very thin layers. With the crystallization of the cholesterin about and in the little clumps or masses which formed the centre of the mass softening or liquefaction of the original mass sometimes occurs, thus leaving a cavity in the centre of the calculus. Recrystallization of the cholesterin occurs, the crystals always forming in a direction vertical to the layers of the shell. This process begins from the nucleus, the crystals shooting out toward the periphery. Meanwhile the calcium compounds of the bile pigments may be dissolved and removed mechanically so that a pure cholesterin stone is formed from a mixed one. It is possible for the stone to become broken up spontaneously because of the unequal contraction of the layers, or because of the increase in the pressure of expansion by infiltration of the cholesterin to the more central portions where it crystallized. This fragmentation together with the dissolving properties of the bile may account for some cases of spontaneous cure of cholelithiasis.

The most important factor, however, in the formation of biliary calculi is the production and presence of a large amount of cholesterin in the gall bladder. This substance is formed from the disintegration of the epithelial cells lining the gall bladder and the bile ducts and in chronic catarrhal conditions of the mucous linings of these vessels a vas tincrease in the production of cholesterin is brought about. In addition the diseased mucous membrane excretes large amounts of calcareous matter, thus furnishing material for combination with bilirubin and biliverdin, sediments which play an important part in the production of

gall stones. Thus the primary cause of their formation is the diseased condition of the mucous membrane of the gall bladder and bile ducts, which condition leads to an increased production of cholesterin and calcium salts.

It remains, therefore, to investigate the manner in which chronic catarrh of this character arises. In late years the importance of the action of bacteria has come to be recognized. Microorganisms are the most important, if not the only, cause of the inflammatory changes under discussion. The possibility of the presence of poisons excreted into and acting on the lining membrane of the ducts is not to be forgotten, but for lack of evidence this possibility may be dismissed. Galippe first suggested the microbic origin of gall stones in 1886. Experiments have shown that the production of cholecystitis by the bacillus typhosus or bacillus coli commune is followed by the formation of gall stones. Microorganisms whose virulence is so attenuated that the inflammation set up by their presence is mild are those responsible for cholelithiasis. Such an intense inflammatory process as suppuration is never the cause, since the production of cholesterin depends upon the preservation of the epithelial lining. Those microorganisms above mentioned are considered the most important active causes of gall stones: the typhoid and colon bacilli.

Of the two the first place must be accorded the bacillus coli. Colon bacilli have frequently been found inside recent biliary calculi; older stones do not as a rule show them. The germs doubtless reach the gall bladder by ascending the bile ducts from the duodenum, a migration which is assisted by the stagnation of bile in the ducts. However it is scarcely probable that the catarrh of the bile passages is set up without a preceding catarrh of the mucous membrane of the duodenum. Aside from this ascending cause it is highly probable that colon bacilli are carried to the liver by the portal vein and that they are subsequently excreted into the ducts and thus carried to the gall bladder.

It is a notorious fact that typhoid bacilli are almost constantly found in the gall bladder of patients dead of typhoid fever and the persistence of the germs in the gall bladder for years has been clearly established. Very obvious connection exists also between typhoid fever and cholelithiasis since a large per cent. of those having gall stones have had a previous attack of the fever. Typhoid bacilli by their long continued mild action set up a chronic catarrh of the mucous membrane of the ducts, and gall bladder and cholelithiasis results. It seems more probable that the bacilli are carried by way of the portal vein to the liver and that they are thence excreted into the bile passages.

The presence of these microorganisms argues against the old idea that the bile is antipeptic, but it is now known that, although it is normally sterile, yet it by no means inhibits bacterial growth and development.

DR. R. G. WASHBURN.

Dr. R. C. Washburn died Nov. 28, 1907, of blood-poisoning, at St. Leo's Hospital, Greensboro. He had resided near Guilford Battle Ground for twelve years where he devoted his whole attention to farming and merchandising.

DR. L. R. BLACK.

Dr. L. R. Black, a prominent young physician of the Wilkinsville section, near Gaffney, S. C., died very suddenly at his home Nov. 8th. He was a son of Dr. John G. Black, of Blacksburg. Dr. Black's wife died a short time ago, which makes his death doubly sad.

The Southern Surgical and Gynecological Association holds its annual meeting in New Orleans, Dec. 17th, 18th, and 19th, 1907. From the preliminary program, receipt of which the Journal herewith makes acknowledgement, the meeting promises to be a most interesting one. The subjects of the papers and the eminent names which appear in the list guarantee as much. The railroads have declared a return rate of one and one-third fare on the certificate plan. The St. Charles Hotel will be headquarters, and a special rate for the meeting has been arranged. Dr. Denegre Martin, of New Orleans, is chairman of the committee of arrangements. No effort will be spared to make this a most successful meeting.

The officers of the Association are as follows: President, Dr. H. A. Kelly, Baltimore; Vice-presidents, Drs. Rufus E. Fort, Nashville, Tenn., and H. A. Royster, Raleigh, N. C.; Secretary, Dr. Wm. D. Haggard, Nashville, Tenn.; Treasurer, Dr. Chas. M. Rosser, Dallas, Texas; Council, Drs. Geo. Ben. Johnston, Richmond, Va., Rich. Douglas, Nashville, Tenn., F. W. Parham, New Orleans, La., Lewis S. McMurtry, Louisville, Ky., Geo. H. Noble, Atlanta, Ga.

Review of Southern Medical Literature

New Orleans Medical and Surgical Journal, October, 1907.

Treatment of Tuberculosis.—Dr. W. F. Couvillion says under the section on Medicinal Treatment. Here we have such a

variety of suggestions that one is loath to go into it. That medicinal treatment is necessary we all admit, but the routine practice of giving a patient cod-liver oil and hypophosphites, or guiacol, or creosote cannot be too strongly condemned. The average practitioner has sought to treat the infection and not the different conditions brought about by infection, and as no effect could be procured the failures have been incessant. To be in a large measure successful one should keep a careful clinical history of his case; be able at all times to tell if the patient is doing better or not. By weight, measure, or count of pulse—one should be in a position to guide his patient in an intelligent and scientific manner. Guiacol and creosote have been very extensively used, but eminent therapeutists have now practically discarded them. In a small percentage of cases they are said to be beneficial, but on the other hand positively injurious to a large percentage of cases. Another relic of our ignorance is cod-liver oil. No close observer can claim any good derived from this agent. Compound syrup of hypophosphites has no special claim to efficacy further than as a tonic, and then other drugs applied according to indications are far superior. The malt preparations come under the same category. In prescribing drugs the chief good is to medicate according to indications and not have a routine method. One case may need iron, another not; one an aid to digestion where another may need treatment applied to a concurrent trouble, as malaria. Koch's tuberculin treatment has not yielded the anticipated, but has borne some good results and opened the way to further researches. After a full consideration of all theories and treatments advanced the author believes are well based the following suggestions: 1. Diagnose your case early, even before the bacillus can be found. 2. At once lay before your patient the true condition and the possible good to be derived from a careful and correct method of living. 3. Open air in the strict sense of the word, always advising a change from city life or crowded living when finances permit. 4. Teach your patient that a mixed diet is the best, and that on the resistance of the patient is based our hope. 5. That the stomach is the citadel of the patient, hence the necessity of preserving its digestive powers. 6. Use medicine when indicated but not in a blind way. Treat what you can do good to, but let alone what you know you cannot help. Make use of natures great vitalizer, the sun, in connection with which always employ its hand maid "Fresh air."

Virginia Medical Semi-Monthly, Oct. 11th, 1907.

Scarlet Fever.—Dr. Hiram Williams says that scarlet fever exhibits the greatest variety in the degree of the toxemia. Many mild cases require nothing beyond isolation, light diet, daily ablutions and avoidance of chill. Nourish the patient. The diet should be fluid and the excretions and secretions should be carefully watched. Gentle diuretics and laxatives may be given. The urine should be examined daily and the amount voided noted. If albumen is present look for casts. Blood is often voided in large enough quantities to be seen with the naked eye. A milk diet and sudorifics may help at this time. Adrenalin has been used and is highly vaunted. Three or four drops of a 1-1000 solution every two or three hours is sometimes ample. The naso-pharynx should receive attention. A normal saline solution may be used for nose and throat. This solution is slowly injected, the child lying on its side, and if proper precautions are taken there need not be any fear of the fluid going through the Eustachian tube and causing an otitis. A rise of temperature accompanies any inflammation of the ear. Wash out the ear with an antiseptic, and if necessary a paracentesis should be performed at once. Suppurating glands may be operated on, but it seems to be well established that a cold bath will allay restlessness and cause a fall in temperature. If the rectal temperature is 104 degrees, a bath of 68 degrees to 70 degrees should be given, of brief duration, after which the patient should be thoroughly dried before returning to bed. It has been established by the bacteriologists that if scarlet fever is not due to streptococci the complications are. Streptococci have been found in the urine, in the throat and nasal discharges, and also in the discharges from the ear. The author has used the antistreptococci serum with most favorable results in six cases. All were injected early and all presented symptoms of a severe type. No complications followed in any of the cases. In some cases of scarlet fever in spite of all care the child will have nephritis. Giving the patient much water to drink, warm baths, sudorifics and increasing the activity of the skin takes much of the burden from the kidneys and tends to prevent this most lamentable of complications. Diuretics cannot be depended upon. Digitalis in the form of an infusion will sometimes be effective. Water in generous quantities is at times of more use than any of the medicinal agents used in treating nephritis.

The Southern Practitioner, October, 1907.

Water as a Therapeutic Agent.—Dr. O. Juettner says it has been estimated that one-third of the whole blood-mass can be assembled in the abdominal wall by a thermic stimulus applied to the abdomen. Schueller exposed the meninges of a rabbit by trephining. Whenever the body of the animal was immersed in hot water the vessels of the pia mater contracted, showing that the amount of the intra-cranial blood supply was at once diminished. Whenever the body of the animal was immersed in cold water the meningeal vessels became engorged. Keeping in mind the facts mentioned let us see what happens within the area when the thermic stimulus is applied. Suppose that a cold water application is made to a limited area. The action of cold is continuous. If the application of cold lasts two minutes the local anemia will last for the same length of time, The moment the action of cold ceases the blood vessel walls which have been contracted begin to dilate, the blood rebounds into the gradually distending vessels, and a condition of hyperemia in the affected area is produced. The vessels do not only return to their normal size but are over-distended with arterial blood. Place a piece of ice on the skin and leave it for a few moments. Immediately anemia is produced. The moment the ice is removed hyperemia supervenes, the area becomes red. This peculiar process depending upon the elasticity of the vessel walls and characterized by hyperemia following anemia is called reaction, and is the pivotal point upon which the science of hydrotherapy revolves. This anemia is coincident with hyperemia of some other region whither the blood has been forced. The moment the action of cold ceases the conditions are reversed. The primary area gradually becomes hyperemic, the secondary area anemic. The reversion of conditions is due to the phenomenon called by hydrotherapists reaction. To illustrate this point by a clinical example: Take a patient suffering from congestive headache and insomnia. Envelop the lower extremities in a cold, moist sheet, and place over this a woolen blanket. The cutaneous vessels of the lower extremities are contracted and a general anemia of the packed area takes place. The temperature of the body aided by the heat producing woolen blanket overcomes the temperature of the moist sheet. The sheet becomes warm and an intense reaction takes place, causing hyperemia of the lower extremities. The enormous increase of the blood supply in the lower extremities is followed by partial depletion of the vessels in the upper part of the body. Objectively the derivating action of this pack is evidenced by somnolence of the patient. The headache disappears and the patient falls asleep. The brain has become anemic.

The Texas Medical Journal, October, 1907.

Yellow Fever Again in Cuba.—Dr. A. M. F. De Ybarra, after sighting many cases and instances of infection, says that the sophisticated assertion that "without mosquitoes there can be no yellow fever" appears in all its nude form when it is remembered that the commission that discovered the mosquito etiology and only manner of transmission of that disease, proved beyond all possibility of a doubt that yellow fever can be very easily transmitted from a sick room to a healthy non-immune by the simple use of a hypodermic syringe. And without the intervention of any mosquito whatever. And the no less deceptive pretension that the female Stegomyia fasciata and no male mosquito of the same species whatsoever, transmits yellow fever, because the female needs human blood to be able to complete the physiological process of ovulation, when it is perfectly well known that thousands of millions of female Stegomyia fasciata mosquitoes in the marshes and swamps go through all their existence accomplishing to the fullest extent the physiological process of ovulation, and thus effectually reproducing their own species without ever having had a single meal of human blood. All of the commissions that have verified the above theory ought to have first studied the atmospheric and telluric conditions under which yellow fever develops and to have made their experimental investigations in a native built house located in a focus of yellow fever infection with all the sanitary conditions there existing in a natural state, but thoroughly well protected against the entrance of mosquitoes instead of building in a healthy locality a sort of ideal autoclave to make the experiments in; they ought to have been extremely careful in the selection of non-immune persons to be used as test cases; they ought to have confined those persons to live steadily in that native built house effectively contaminated with yellow fever poison both day and night. They ought to have fed these non-immune persons in the same way, with exactly the same kind of food and in the same amount that they were accustomed to be fed, and not on a highly nutritious diet. And why have they not also made, as they should, controlling experiments with biting fleas, bed bugs, fleas, chigoes, sand ticks and lice?

The American Practitioner and News, Oct., 1907.

A Few Reasons for Some Unsatisfactory Results in the Treatment of Ano-Rectal Diseases.—Dr. B. Asman believes that there are comparatively few cases of hemorrhoids, pure and simple, that is absolutely uncomplicated by other local disease of a different nature, perhaps, but requiring attention at the same time if a perfect result is to be anticipated. A rectal polyp being attached to the bowel wall, usually much higher than internal hemorrhoids are found, is capable by means of its long pedicle of being pushed about in a pouch of the rectum to either side downward or upward, and because of this fact may be overlooked unless special care is taken in each case. The pedicle of a rectal polyp being drawn upon and stretched each time fecal matter passes through the rectum gradually becomes elongated to such an extent that the hard body of the polyp can be grasped by the sphincter muscle. Because of friction this soon leads to ulceration, either of the hemorrhoids surrounding the polypi, or more frequently to a deep ulceration between two of the hemorrhoids. If this ulceration, the base and edges of which are always indurated and lined by unhealthy granulation tissue, is left unattended to at the time of the operation for hemorrhoids, difficulty will be experienced and a much longer time required to bring about healing of the rectal wound. If the polyp has been allowed to remain it is repeatedly grasped by the sphincter, the wound is kept from healing, the sphincter becomes exceedingly irritable and the patient suffers more than before. Because of the location of the wound in hemorrhoidal operations great care must be taken that it is kept clean and that infection is prevented, for should the latter occur it would likely result in a deep-seated ischio-rectal or pelvi-rectal abscess. In from ten days to two weeks following the removal of hemorrhoids an examination of the anus should be made to determine whether any adhesions of apposed raw surfaces have taken place. If such adhesions are found they should be gently separated in order that there may be no tendency toward contraction of the anus.

Nashville Journal of Medicine and Surgery, October, 1907.

The Early Diagnosis and Management of Pulmonary Tuberculosis. Dr. R. W. Frey says that when these patients come to us, we obtain a history about as follows: They usually state that they have not been themselves of late; they feel run down and easily tire; find that they have been steadily declining in weight and general health for several months. On carefully questioning these patients we frequently find that their surroundings are not of the best; coupled with their mode of life, find that they have had an opportunity to acquire tuberculosis in some way. This knowledge is of the utmost importance. This history should be followed by a careful physical examination, and will usually find the following: 1st. A steady decline in weight and general health, or hemorrhage without much decline in weight or health. 2nd. Patient is easily fatigued. 3rd. Every change in the weather causes them to contract a slight cold. 4th. A slight hacking cough on rising in the morning. 5th. With this cough a little mucus is raised, in which may or may not find the tubercle bacillus. 6th. If the day is dry and finè the cough soon subsides, at least in a few hours, to be repeated in the morning following, and should the day be cool and damp the cough will continue through the day and into the night. 7th. An increased frequency of the pulse rate; this pulse being at all times soft and compressible. 8th. A slight rise of temperature every afternoon—this temperature must be taken at the same hour of the day, and under as similar circumstances as possible to be of the greatest diagnostic value. In the author's opinion the above symptoms and history should always cause one not only to suspect, but to pronounce as positive the case as one of incipient tuberculosis, and more especially should this be done if these symptoms have been preceded by a grip, pleurisy, or pneumonia. The author makes it a rule to confirm or refute his diagnosis by the fluoroscope or shadowgraph, or both. He believes it is the opinion of some of the best observers that no case, where possible, should be denied this valuable aid to an early and correct diagnosis, as it is just at this stage of the disease that one can best arrest its progress. Any one accustomed to the use of the shadowgraph in the diagnosis of the diseases of the chest there are hardly any other means that makes one feel so sure of the diagnosis as a good shadowgraph.

Gaillard's Southern Medicine, Oct., 1907.

Some Observations on Diagnosis and Treatment of Whooping Cough.—Dr. G. T. Grinnan says of the various preparations to be inhaled creosote is the best. The drug may be used in respirator or vaporized over an alcohol lamp. Carbolic acid and cresoline are also inhaled in the same manner. Of the drugs given internally about 40 per cent. of those in our materia medica are in use. As pointed out by Holt the four drugs from which greatest benefit has been derived

are antipyrine, quinine, belladonna and bromoform. Of these four probably antipyrine heads the list. A child six months old can take one grain of antipyrine every six hours. The drug can be given in relatively large doses. In case of pneumonia antipyrine should be discontinued. A combination of antipyrine and digitalis does very well. Bromide of soda is often used with antipyrine. Quinine is not to be used for very young infants, as it is apt to disturb the stomach. Twelve or fifteen grains are to be given daily. It is an excellent remedy for those who can take it. Belladonna has been largely used, and with a marked degree of success. In using belladonna begin with small doses and increase both the size and frequency of the dose. To an infant eighteen months old one-fourth of a minim of the fluid extract may be given every four hours. If atropine is used gr. 1-800 may be used in the same way. Some authors regard belladonna as the best drug for the treatment of pertussis. Bromoform has marked value but must be used with caution. When used bromoform may be given in an emulsion, or probably a better method is to drop it on sugar. The dose at two years is from one to three drops from three to five times a day. When giving bromoform in emulsion a shake label should always be put on the bottle. Chloroform may be used to ward off convulsions or to prevent asphpxia. Intubation tubes have done good service in some cases; the rubber tube is the most popular. Vaccination and diphtheria serum are of doubtful utility. Dr. Anders of Philadelphia recommends a mosquito net to prevent draughts. It may be safely said that no internal medication shortens the attack but it does diminish the number and severity of the paroxysms. Some three or four years ago Dr. T. W. Kilmer of New York introduced quite a novel mechanical appliance for the prevention of the spasm and cough in pertussis in the form of an abdominal belt. In infants a belt four or five inches wide (children five to eight inches wide) is fastened around the abdomen. A slight degree of constriction is sufficient to produce moderation of the cough. Dr. Kilmer says that 95 per cent. of those cases who used the belt were benefited not only in regard to cough and paroxysm, but especially in regard to vomiting.

The Mobile Medical and Surgical Journal, October, 1907.

Some Points of Interest in Cases of Carcinoma of the Stomach.—Dr. C. E. Dowman, Jr., believes that no matter how clear the symptoms may appear on paper there are a certain number of patients who have many suspicious symptoms of cancer of the stomach, yet with what methods of examination we have at hand, with one exception, a positive diagnosis cannot be made. The one exception is the use of the diagnostic laparotomy. The importance of resorting to this "higher court," as it were, cannot be too highly emphasized. With symptoms which cause a competent surgeon to advise an exploration, where after all the other diagnostic methods have been faithfully tried without leading to a definite diagnosis of the condition present, is one which can usually be aided by the operation, even though carcinoma is found not to be the trouble. Most often the condition found to be present in these cases of doubt is either a benign or a malignant stenosis of the pylorus. If the former is found it can be relieved by one of the usual operations for such a condition. If the latter is present then the diagnosis is made and one can immediately proceed; if possible, then a resection; if too far advanced to be treated radically then a palliative gastro-entereostomy, if such be indicated. Again other conditions may be found, should no carcinoma be found, which may possibly be relieved by surgical methods, i. e., perigastric adhesions, gastroptosis, dilitation, atony, etc. The author has little faith in the claimed beneficial results of the surgical treatment of the last three conditions mentioned. As a matter of fact in those clinics where the best stomach surgery is done it is very seldom that a diagnostic laparotomy is performed, where some tangible cause for the symptoms is not found, a cause which generally indicates surgical treatment. Still it must be admitted that a certain number of negative findings are made. But even here the operation has had its advantages, for what patient who has had symptoms that have made him fear that perhaps he has cancer of the stomach, would not appreciate being told definitely that such a condition was not present? The operation itself, i. e., the mere opening the abdomen and examining the abdominal viscera is in these days of antiseptic surgery practically without danger, and when one takes into consideration the fact that by such an undertaking many early cases of carcinoma are diagnosed and cured by a timely resection all will agree that the slight risk taken is justifiable.

Maryland Medical Journal, October, 1907.

The Graduates of the Woman's Medical College of Baltimore and their Work.—By Dr. W. M. Lewis.

Book Notices.

A Text-Book of Practical Gynecology. For Practitioners and Students. By D. Tod Gilliam, M. D., Emeritus Professor of Gynecology in Starling-Ohio Medical College, and Sometime Professor of Gynecology, Starling Medical College; Gynecologist to St. Anthony and St Francis Hospitals; Consulting Gynecologist to Park View Sanitarium, Columbus, Ohio; Fellow of the American Association of Obstetricians and Gynecologists; Member of the American Medical Association, of the Ninth International Medical Congress, etc. Second, Revised Edition. Illustrated with 350 Engravings, a Colored Frontispiece, and 13 Full-page Half-Tone Plates. 642 Royal Octavo Pages. Extra Cloth, $4.50, net: Half-morocco, Gilt-top, $6.00, net. Sold only by Subscription. F. A. Davis Company, Publishers, 1914-16 Cherry Street, Philadelphia.

The title indicates what the book really is: a plain, practical work for the student and busy practitioner. Mooted questions are avoided and all superfluous matter excluded, yet enough detail is given to make the book generally useful. Those procedures of treatment which have proved valuable from long trial are emphasized, yet many new and important methods are included. In this revised edition some portions of the text has been replaced by newer and better, although most of the changes are confined to technics. Many new illustrations have been introduced and for ready reference a regional index of symptoms is appended. The book is one of worth from every standpoint.

A Text-Book of Physiology. For Medical Students and Physicians. By William H. Howell, Ph. D., M. D., LL. D., Professor of Physiology, Johns Hopkins University, Baltimore. Second Edition, Thoroughly Revised. Octavo volume of 939 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, $4.00, net; Half Morocco, $5.50, net.

No text-book has sprung into greater prominence within so short a time as has Howell's Physiology. It is coming to be recognized as the standard in medical schools, and not alone in American schools. Since its first appearance in 1905, the reception of the book has been little short of phenomenal. At present it is in use in over seventy colleges. This fact alone speaks volumes in its favor. Throughout the work main emphasis is laid upon those facts and views which will be directly helpful in the study of general pathology and in the practical branches of medicine, yet the importance of experimental work is not neglected. This revised edition includes all advances in physiology which have proved scientific and accurate. In this way the reader receives the full benefit of the latest research work of the world's physiologists.

The Pancreas: Its Surgery and Pathology, By A. W. Mayo Robson, D. Sc. (Leeds). F. R. C. S. (Eng,) of London, and P. J. Cammidge, M. D. (Eng.) D. P. H. (Camb.), of London. Octavo volume of 546 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, $5.00, net; Half Morocco, $6.50, net.

The progress made within recent years in the knowledge of the functions and diseases of the pancreas has been so rapid that a book dealing with this important organ has become a necessity to every physician and surgeon. This entirely new work has the distinct advantage of incorporating the results of the original investigations of three eminent surgeons, whose work along these lines has been unusually successful. The so-called "pancreatic reaction" has been discussed in detail and its diagnostic value indicated. The intimate etiologic relation existing between gall stones and pancreatitis is fully and clearly presented, as is also the association of inflammation of the pancreas with catarrhal conditions of the upper gastro-intestinal tract. There are chapters upon Anatomy, Embryology, Histology, Physiology, Pathology, Symptomatology, and Injuries and Diseases and their treatment, and there are special chapters on Chemical Pathology and Diabetes. Pancreatitis is very fully treated, as are also Pancreatic Calculi, Cysts, Neoplasms, etc. There are a large number of original illustrations.

Diseases of the Skin. A Treatise on Diseases of the Skin. For the use of advanced Students and Practitioners. By Henry W. Stelwagon, M. D., Ph. D., Professor of Dermatology, Jefferson Medical College, Philadelphia. Fifth Edition, Revised. Handsome octavo of 1150 pages, with 267 text-illustrations, and 34 full-page colored and half-tone plates. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, $6.00, net; Half Morocco, $7.50, net.

The demand for five editions of this work in a period of five years indicates beyond doubt the practical value of the book. It gives the physician a treatise written on plain practical lines. The present edition

has both omitted unnecessary and obsolete material and added new matter which has resulted from investigation since the last edition. Most of the changes are found in the section on Tropical Skin Diseases in which field a great development has been seen. The excellent character of the illustrations form a specially attractive feature of the book. Stelwagon's Diseases of the Skin needs no new introduction. It is the standard of excellence in America.

A Text-Book of the Practice of Medicine. By James M. Anders, M. D., Ph. D., LL. D., Professor of the Theory and Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College, Philadelphia. Eighth Revised Edition. Octavo of 1317 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, $5.50, net; Half Morocco, $7.00, net.

Anders' Practice of Medicine is so well known to both students and practitioners that any comment on its excellent qualities is quite superfluous. Since its first appearance it has been so heartily received that editions have been rapidly exhausted and already it has reached the eighth. The book has been critically and thoroughly revised and new acquisitions to our knowledge incorporated, bringing the work into consonance with the most up-to-date books of the day. Specially attractive features are the exhaustive manner in which differential diagnosis and treatment have been discussed. In these details the work is unsurpassed. Tabulations of the distinctions between diseases are elaborate and accurate. Methods of treatment are considered in full. Some of the subjects are newly discussed with a fullness which greatly enhances the value of the book.

A Manual of the Practice of Medicine. Prepared especially for Students. By A. A. Stevens, A. M., M. D. Eighth Edition, Revision. Illustrated. Price, $2.50. Philadelphia and London: W. B. Saunders Company, 1907.

The fact that Stevens' Manual has reached its eighth edition is evidence of the demand for it. The demand guarantees its excellence. As a clear, accurate and concise manual it has no superior. In this new edition the entire contents have been revised and brought thoroughly up-to-date. Students find it a most convenient little volume.

Diseases of the Genito-Urinary Organs and the Kidney. By Robert H. Green, M.D., Professor of Genito-Urinary Surgery at the Fordham University, New York; and Harlow Brooks, M. D., Assistant Professor of Pathology, University and Bellevue Hospital Medical School. Octavo of 536 pages, profusely illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, $5,00, net; Half Morocco, $6.50, net.

This new work covers completely the subject of genito-urinary diseases, presenting both the medical and surgical sides. It fulfills the need on the part of both general practitioner and surgeon of a book for quick reference. Only methods which are practical and generally useful and such as may be readily employed by any well-equipped physician have been incorporated. The book is written in a clear condensed style so that the information can be readily grasped and retained. Diseases of the kidney are treated in elaborate detail. The text is profusely illustrated with original drawings.

Blood-Stains: Their Detection and the Determination of their Source. By Major W. D. Sutherland, M. D. Wm. Wood & Co. New York, 1907.

The author has supplied a genuine want when he has given to the Medical Profession, the Bench and the Bar a work which is absolutely unique. No other language contains a book giving accurate and exhaustive tests whereby blood stains can be detected and their source determined. The subject matter is presented in clear, concise language, free from excess of detail. It is a book which will find a place in the Medico-legal world to which no other has ever attained.

Tropical Diseases. A Manual of the Diseases of Warm Climates. By Sir Patrick Wauson, K. C. M. G., M. D., LL. D. (Aberd.) With illustrations and colored plates. Fourth Edition. Wm. Wood & Co. New York, 1907.

Manson's work on tropical diseases is a classic. Certainly no man can speak more authoritatively on the subject. Tropical medicine has undergone and is still undergoing most rapid development. The various Governments are establishing schools of Tropical Medicine and the medical world generally is taking more interest in the diseases peculiar to the hot zones. Important discoveries have been made which are of the greatest value, In this revised edition is incorporated the latest work on yellow fever, infection with Filaria Bancrofti, and Ankylostomum duodenale. Trypanosomiosis and its relation to sleeping sickness is discussed. These indicate but a small part of the things of value included within the pages of the book. No library is complete without it.

Surgical Applied Anatomy. By Sir Frederick Treves, F. R. C. S., Sergeant-Surgeon to H. M. the King, Late Lecturer on Anatomy at the London Hospital. New (5th) edition, thoroughly revised. Pocket size 12mo, 640 pages, 107 illustrations, of which 41 are in colors. Cloth, red edges, $2.25, net. Lea Brothers & Co., Philadelphia and New York. 1907.

This is one of the rare works which is all meat. That it is widely appreciated is shown by the fact that 37,000 copies have been printed. The reason is seen on every page. It deals with a "borderland" subject, where two great branches meet and overlap. To write authoritatively accordingly requires full command of both, and Treves possesses this knowledge in a measure that has made him one of the most famous surgeons and anatomists in the world. He also has the gift of clear and logical thought and hence of terse and graphic expression. These qualities render his book unsurpassed both for the surgeon and the student. Answering every requirement, it enjoys the combined demand shown in its sale. The author has again brought it up to the latest date, thoroughly revising it and adding considerably to its text and illustrations. The use of colors is a new feature of obvious value in connection with its subject.

Visiting and Pocket Reference Book (Perpetual). 1908. J. H. Chambers & Co., Publishers. St. Louis, Missouri. Revised and enlarged, handsomely vellum bound, lapel, pocket size. Price, 50c.

Condensed, at the same time sufficiently elaborate to give such information required in a book of this character. Convenient to carry in the pocket; containing 128 printed and blank pages. Synopsis of Contents: Table of Signs—How to keep Visiting List; Obstetrical Memoranda; Clinical Emergencies; Artificial Respiration; Poisons and Antidotes; Dose-table; Important Incompatibles. Ruled printed pages for—Weekly Visiting List; Memoranda; Nurses' Addresses; Clinical Record; Obstetric Record; Birth Record; Bills Rendered; Cash Received; Miscellaneous Memoranda; Death Record; Vaccination Record; Articles Loaned; Cash Loaned. Post-paid on receipt of twenty-four 2c. stamps.

Relations of the Doctor to the Alcoholic Problem. By J. D. Crothers, M. D., Hartford, Conn. Reprint from The Medical Fortnightly.

Transactions of the American Surgical Association. Vol. XXV. Edited by Richard H. Harte, M. D., Recorder. Printed for the association by Wm. J. Dornan, Phila. 1907.

Transactions of the Twenty-ninth Annual Meeting of the American Laryngological Association. Held at Washington, D. C., May 7th, 8th and 9th, 1907. Published by the Association, New York. James E. Newcomb, M. D., Sect'y., New York City.

Abstracts of the Leading articles of the month.

Report of One Hundred and Seven (107) Cases of Cancer treated with the X-Ray with Comments Thereon.—Dr. Ennion G. Williams, Professor of Pathology, Medical College of Virginia, Richmond, Virginia, sends an abstract of his paper read before the American Koentgen Ray Society, Cincinnati, October, 1907.

His cases were unselected and represented the work as it occurred in his X-ray practice. He emphasizes the vast difference between the clinical nature of different cases of cancer, and states that it is only possible to approach an estimate of the value of the ray by studying a large number of cases, divided into classes, which are more or less similar and consequently susceptible of comparison.

The cases are classified in six tables, which show the date of treatment, age, sex, location and extent of growth, number of exposures, duration of treatment, the result, and remarks concerning points of special interest.

The first class includes those growths on the skin, advanced beyond a keratosis, having a thick scale covering an ulcerated area of long standing, with the history of growing more rapidly of late and also those growths with elevated margins and ulcerated centers, growing steadily, having started usually from a mole or papilloma.

Of the fifty-three (53) cases, fifty-two (52) healed. In the case not healed the treatment was interrupted by an attack of pneumonia. The growth was afterwards excised. In four of the fifty-two cases there was a recurrence which healed again with the X-ray.

The first case was healed four and a half years ago. The average number of exposures was sixteen (16) and the average duration of treatment was five (5) weeks.

The second class includes those growths which originally began as those of the first class, but have reached a more advanced stage and invaded the subcutaneous tissues, either leaving in their wake a deep ulcer-

ated and sloughing area, or by the rapid proliferation of malignant cells have given rise to a large protuberant or rose-like mass.

Of the seventeen (17) cases eleven (11) were healed, in six (6) of which there has been no recurrence or evidence of malignancy to the present time, in the remaining five (5) there was a recurrence. Four (4) cases were improved. Two (2) were unimproved.

The average number of exposures was forty-nine (49). The average duration of treatment was five (5) months.

The third class includes the extensive recurrent and metastatic growths in the deep structures. The original growth may or may not have been on the skin.

Of the nine (9) cases reported, in two (2) there was an apparent disappearance of the growth. One has remained healed twenty (20) months. The case was a recurrent growth after paste treatment, and involved the nasal and frontal bones. In the other case there was a recurrence.

Two (2) cases were temporarily improved, that is, the pain was relieved, and there was a decrease in the size of the growth. Five cases were unimproved.

The fourth class includes carcinomata on mucous membranes.

Of ten (10) cases, five (5) were on the lower lip. Four (4) of these were temporarily improved, but not healed, and were afterwards excised. One case was unimproved. Excision is now advised for growths on the lip.

In three (3) cases there was extensive involvement of the tongue, floor of the mouth and glands of the neck. They were unimproved.

One (1) case of carcinoma of both tonsillar regions was temporarily benefited by the relief of pain and diminution in the size of the growth on one side. The growth later progressed and terminated fatally.

The fifth class includes primary carcinomata of the breast.

There were three (3) cases—one was given eight (8) exposures in eight (8) days. A few days later a radical operation was performed. Microscopic examination of the tissue, removed, showed disintegration of cells in many alveoli. Patient later died of recurrence.

Second case, a tumor in upper outer quadrant of left breast, supposedly malignant. After ninety (90) exposures in ten (10) months the tumor had shrunken to a small indurated mass. There has been no reviving of the growth, now after three (3) years.

The third case was a carcinoma, beginning on the skin of the breast. After fifteen (15) exposures, extending over one month, a dermatitis was produced, which subsided, accompanied by the disappearance of the growth. Twenty-six (26) months later it returned, was treated by ray and disappeared again.

The sixth class includes the recurrent carcinomata of the breast.

Of fifteen (15) cases treated, three (3) were unimproved. Seven (7) showed great improvement by the reduction of growth, and the relief of pain. In five (5) there was complete disappearance of all evidence of disease.

In three (3) of these five (5) the disease reappeared a year later.

In the other two (2) there has been no recurrence to the present time, two and a half (2½) years and four months afterwards respectively.

The recurrence of a malignant growth is dependent upon whether or not all the malignant cells have been destroyed. If the ray has destroyed so many of the cells that the growth has been reduced to a mass invisible to the eye, the ray will undoubtedly destroy the remaining cells, if its distinctive influence be continued.

Many of the superficial growths healed without producing any reddening of the surrounding tissues.

Healing seemed to take place better when the growths were exposed to the air and sunlight, than when covered with dressings and ointments.

The apparatus used was two static machines and three coils, with mechanical, mercury and electrolytic interruptors. The distance of the anticathode from the surface varied from six (6) to ten (10) inches in deep cases. The duration of single exposures varied from ten (10) to twenty (20) minutes. One must know well his apparatus, in order to give the proper dosage, in order to obtain a desired result.

From a review of all the cases it is evident that practically all the cancers, commencing on the skin can, in their early stages, be completely and permanently eradicated under the influence of the X-ray, in a simple and painless manner, without leaving a scar, and without any danger to the patient.

Much benefit can be expected even in the advanced stages, by relieving pain, retarding the growth and prolonging life. The X-ray is of doubtful value in the treatment of cancers on the mucous membranes and primary growths of the mammary gland.

Unusual Cases of Pernicious Anemia.

Gulland (British Medical Journal) believes that pernicious anemia is becoming more frequent, having seen 37 cases within the last year. The view, frequently expressed, that the disease consists of a rapid-

ly progressive anemia, soon ending fatally, is certainly false. Many cases run a very chronic course, and often the anemia itself occupies a very subordinate place in the symptom complex. The writer believes that pernicious anemia is due to a toxemia of diverse origin that may affect in various ways the blood, the hematopoietic organs, the nervous system or the gastrointestinal tract. Thus there are cases that present the clinical picture of amaurosis, peripheral neuritis or tabes dorsalis. Sometimes the most striking features consist in aphasia, or in epileptiform attacks. It is not at all unusual to have gastrointestinal disturbances occupying the foreground of the symptomatology, and sometimes leading to the diagnosis of gastric cancer, since in both cases the gastric juice may contain no hydrochloric acid. Occasionally psychic disturbances may be so outspoken that the patient is sent to an asylum for the insane. The chief point in the diagnosis of pernicious anemia is the existence of a high color index. If the first two figures of the red blood corpuscle count are multiplied by 2, and the result divided by the percentage of hemoglobin, a figure is obtained in pernicious anemia varying from 1.1 to 1.4, whereas in secondary anemias the index is usually under 1. The stained blood spread also offers a more or less characteristic picture. The author's treatment in general coincides with the well-known procedure advocated by Grawitz. Arsenic often does good, whereas iron is positively harmful.

Auscultatory Blood Pressure Determination.

Fellner and Janowski (Muench med. Wochenschr.) described a convenient method of determining the systolic and diastolic blood pressure. The usual Riva-Rocci armband with mercury manometer, etc., is used. While the upper arm is being compressed by means of the armband, the observer auscultates by means of a stethoscope placed over the cubital artery, best in the bend of the elbow. When the compression of the upper arm has reached a certain degree, a systolic murmur can be heard over the cubital artery. This murmur persists as the compression of the upper arm increases, until a point is reached at which it suddenly vanishes. The pressure at which the arterial murmur appears, and at which it ceases, are carefully noted. Comparison with various other methods, especially with the excellent one of Recklinghausen, have shown that the arterial murmur appears when a compression corresponding to the diastolic pressure has been reached, and that the cessation of the murmur corresponds to the systolic blood pressure. It was pointed out that a similar method had been described two years ago by Korotkow. If further experiment confirms the views of the authors a most convenient and simple method of estimating systolic and diastolic blood pressure will be at the disposal of clinicians.

Diseases of the Testicle.

Power (Brit. Med. Jour.) pays special attention to tuberculosis of the testicle in children. It is more common than is generally believed. The inflammation is sometimes primary, but is more often associated with other forms of tubercle, and there is frequently a definite history of injury. The diagnosis is easy; but the course of the disease is different from what it is in adults, the gland not being functional in children. When the infection is simple and the child fairly healthy, the disease may remain localized in the affected gland. Eventually the testicle resumes its original condition, or if involution goes too far, it atrophies. The treatment in these cases may safely be palliative. The prognosis is not so good when there is mixed infection with pyogenic organisms. Here an abscess is soon formed and the neighboring lymphatic glands become involved. When such suppuration occurs the testicle should be removed as soon as possible.—Howard discusses torsion of the testis. This occurs both in the fully descended and in the imperfectly descended testis. The exciting cause of the torsion is not precisely known; no exciting cause, such as strain, is usually in evidence. The symptomatology resembles that of strangulated hernia, but the vomiting is not so persistent, the bowels react to enemata or purgatives, and flatus is passed. The temperature may be slightly elevated. The testicle itself is swollen, and its various parts cannot be differentiated. Suppuration, gangrene, or atrophy may occur. The result of torsion is usually atrophy of the testis affected. In cases of acute torsion in the fully descended testis which cannot be untwisted, the case should be treated expectantly unless the symptoms are very urgent, as recovery is possible without marked atrophy, and if atrophy does occur, the patient is not worse off than if orchidectomy had been performed. But should suppuration appear imminent the testis should be removed at once.—Dixon, discussing the organotherapy of the testis, states that the gland has two distinct functions, and the changes occurring at puberty are more likety to give a measure of the presence or absence of testicular tissue than the spermatic function. In spite of this, there is no evidence of value showing that orchitic extract, whether given by the mouth or

subcutaneously, supplies a deficient secretion. This must mean that the active constituent of the secretion does not occur free in the testis. (Med. Rec.)

Albuminuria Due to Faradization.

Zhebrofski and Gilevitch (Roussky Vratch) describe a method of inducing albuminuria in any kidney. The method is based upon the fact that the faradic current applied to the region of the kidney in some cases produced an albuminuria or increased the amount of albumin in the urine. One electrode, which was a square of ten centimetres, was placed upon the lumbar region, obliquely in such a manner that its upper border touched the tenth rib and its inner was two fingers' breadth away from the spine above and three below. The second electrode was circular and was placed upon the outer edge of the rectus muscle and was pressed as deeply as possible towards the kidney. The patient sat with the body leaning slightly forward. The strength of the current was regulated according to the patient's sensation. Usually a current strong enough to be felt, but not painful, was used, avoiding if possible contraction of the abdominal muscles. The faradization of each kidney lasted about fifteen minutes. The urine was collected immediately before faradization, and subsequent specimens were collected at intervals of twenty minutes. In thirty-three kidneys examined some were pathological, others were suspicious, while in the third group there was apparently no renal disease. Of thirteen pathological cases seven showed a marked albuminuria, four a slight albuminuria, and two no albuminuria. Of fifteen apparently healthy kidneys, one showed a marked albuminuria, nine a slight, and five no albuminuria. In five suspicious cases sporadic albuminuria was seen in every instance. In some of the cases faradization gave rise to changes in the urinary sediment. The changes due to faradization always disappeared within an hour or an hour and a half after the experiment. The authors do not present any positive conclusions, in view of the fact that they did not observe any cases verified by operation or autopsy.

Rigor Mortis in a Stillborn Child.

Ulrich (Brit. Med. Journ.) after quoting Wolff, who has collected 34 cases, and Caruso, who presents 49, adds a further instance where this condition existed. The patient was, he notes, a single woman admitted into the wards of the Erfurt Midwives Institute in labor at term. There appeared to be twins, but the evidence on palpation was not quite clear. Heart sounds could distinctly be heard over the upper part of the uterus, especially to the right, but not over the lower part. A head could be felt presenting, and a child was delivered about 18 hours after the beginning of labor; there was great delay during the expulsion of the shoulders although the pains were strong. The child was a female over 19 inches in length and six pounds in weight: The integuments were pale and nowhere macerated. There were no signs of injury to the cranium. Rigor mortis was very marked. The head presented when the second child was delivered; it was a little smaller and lighter than the first. It was living and has since been reared. The placentas were fused, but each fetus had separate membranes adherent to each other where they touched. The insertion of the funis was velamentous in both fetuses and there could be no doubt that, owing to the disposition of its cord, the first fetus had been killed by pressure upon it. There was no evidence by which it could be ascertained how long death had occurred before delivery. The case shows that rigor mortis is not evidence that a child must have died before delivery. Had the woman, who was single, been delivered outside a public institution suspicion of foul play might have arisen.

The Secretion of Gastric Juice in the Fasting Stomach.

Gentzen (Deutsch. med. Woch.) studied the gastric function by means of Sahli's desmoid test in a number of healthy persons who had fasted eight hours. In this test methylene blue is placed in a rubber bag tied with a catgut string. The gastric juice digests the string, the methylene blue is liberated and passes into the intestine, where it is absorbed, and appears as such or as chromogen in the urine in from 4 to 10 hours. He claims that when the desmoid pill is given with food, as it usually is, there is some reflex stimulation of the gastric secretion.

In 53 healthy persons the writer used this test and in 52 the pill was dissolved and methylene blue appeared in the urine in a remarkably short time; in 33 it appeared in less than two hours, in 15 cases after two to three hours, in two cases after four hours and in three cases after six to seven hours.

Two objections to the desmoid test have been made: 1. That the gastric mucosa is stimulated mechanically by the irritation of the pill, and, 2, that the catgut may be dissolved in the intestine. To the first the author replies that the work of Pawlow has shown that mechanical irritation of the gastric mucosa does not stimulate a flow of the gastric secretion. To show that the catgut

string is not digested in the intestine he made the following experiments: he placed a desmoid pill in the upper portion of the duodenum of five rabbits and one also in the lower portion of the duodenum of another rabbit. Two of the rabbits showed methylene blue in the urine in five hours and the sixth passed the pill intact in the feces, no color appearing in the urine. In the latter case the duodenal secretion showed an alkaline reaction. Thinking that the catgut string might have been digested by gastric juice which had passed into the duodenum in the first two rabbits, he repeated the experiment in other rabbits after ligating the pylorus. The animals lived sixteen hours and during that time no methylene blue appeared in the urine. At autopsy the pill was found intact in the duodenum. The gastric juice of rabbits was found to be similar to the human secretion in its action on catgut.

The healthy fasting stomach gives the desmoid reaction unusually promptly. When the methylene blue is detected in the urine as early as from one to three hours after ingestion, the writer thinks that it must have been liberated in the stomach and not in the intestine, as in the latter case the urine does not show the stain for a much longer period. When keratin-coated pills containing methylene blue were used and therefore not freed in the stomach, methylene blue did not appear in the urine and the pills were found intact, but with the keratin dissolved. He concludes that there must be a certain amount of gastric juice in the normal fasting stomach which digests the catgut string, and says that the test can be easily applied in the clinic to determine if the secretion of the stomach is sufficient.

Brain-Puncture.—Pollack (Mit. a. d. Grenz. d. Med. u. Chir.) describes the method, first introduced by Neisser in 1904, which is not to be confused with the suggestion of A. Kocher, to make a small opening in the skull for the purpose of injecting tetanus antitoxin into the lateral ventricles, as the purpose of brain puncture is to attempt to remove something and on the findings base a diagnosis. With the patient in a semi-reclining position, to partially exsanguinate the meninges, a small opening is made through the skull by a motor-driven drill of small calibre, and through this a narrow-walled canula is inserted for the diagnosis of underlying conditions. A general anesthetic is very rarely necessary, but if used a few drops of chloroform are given, more as a suggestive narcosis; or, as some authors have suggested, a local injection of cocain is useful. A blunt-pointed needle is used for the determination of extradural hemorrhage, while a sharp canula is used when it is necessary to puncture the dura; and if it is necessary to aspirate, a Luer syringe is used. The method was originally proposed to aid in the diagnosis of brain abscess, epi- and subdural hematomas, brain cysts and tumors. It is now extended to include prognostic and therapeutic indications. One case of extradural hemorrhage coming on slowly after an injury, was explored in two places; in the first instance clear serum was encountered, which made them believe that the bleeding was stopped, and at the second puncture the clot was encountered and removed by aspiration, with no return of any trouble within a year. By this method they expect to make it unnecessary for exploratory craniotomy on both sides of the skull in cases difficult to diagnose, to locate operable conditions so that the operation need not be very extensive. This applies particularly to cysts and tumors of the cerebellum, in that they are most frequently hard to localize or diagnosticate. In cysts it is possible to relieve the condition as well as make a diagnosis. One case is cited in which a cyst was punctured seven times through the intact skull in a period of one and a quarter years, 250 c.c. of clear fluid having been removed in that time, and the case has remained well for over three years. There are several series of brain tumors reported in which the puncture had made a diagnosis, an operation following in favorable cases, and the excellent results of operation are claimed to depend on the knowledge gained by the preliminary puncture. Old hemorrhages when aspirated are diagnosed by the reddish yellow fluid withdrawn in which are brownish flakes, seen through the microscope. Increased intracranial tension is one of the most beneficial effects of puncture. More recently the method has been used to puncture the lateral and the fourth ventricles for primary hydrocephalus internus and secondary hydrocephalus after plugging of the veins of Galen, or closure of the aqueduct of Sylvius. They have also tapped the ventricles in a case of genuine epilepsy, removing a reagent glassful of fluid on several occasions, each time relieving a violent headache and making the patient feel much better. They suggest many experiments which they have tried, or will try, to show that the foramen of Magendie is open or closed by a growth or disease, by using lumbar puncture in conjunction with ventricle puncture. They have also shown the connection between the lateral ventricles by introducing methylene blue into one ventricle and removing it from the other.

Fracture of the Scaphoid.—Hirsch (Deutsche Zeitschrift fur Chirurgie) says there are two forms of fracture of the scaphoid: (1) Intracapsular, across the middle of the bone at right angles to it. This shows little or no tendency to heal by bony union, and leads either to a false joint in the middle of the bone or interferes with the motion of the wrist. It may even lead to a sort of arthritis deformans. (2) Splitting off of the tuberosity by traction on the ligament from the styloid process of the radius. This is extracapsular and heals by bony union. The fracture is usually caused by a fall on the hand stretched out, in ulnar flexion or in radial flexion, with the fingers spread apart. The symptoms are not diagnostic, with the exception of x-ray examination, which with the hand in extreme ulnar flexion will show the fragments separated. The usual symptoms are swelling of the wrist, most marked on the radial side, limited motion of the wrist, especially of dorsal flexion (diagnosis from sprain), and tenderness in the "snuff-box" between the tendons of the extensors of the thumb. The "snuff-box" seems to be filled up, and the branches of the radial artery are plainly felt in it. If the surgeon's thumb and forefinger are placed on the palmar and dorsal surfaces of the scaphoid, and the injured hand placed in ulnar flexion, a point of tenderness will be found at the bottom of the space. Crepitation is rarely elicited.

The symptoms of an old ununited fracture are similar. The hand is kept in radial flexion, and the wrist is quite stiff and painful on motion. There is the same tenderness in the "snuff-box." After slight traumatism there may be acute attacks of pain in the wrist with swelling and disability, the condition gradually returning to the latent state if the joint is not used.

The treatment of fracture of the tuberosity is the application of a splint with the hand in radial flexion; immobilization for two to three weeks. Fracture of the body does not heal in a splint, so an effort must be made to preserve a useful wrist by producing a painless false joint between the two fragments. Cold and massage, with temporary extension, will help this. If this is impossible, or if the fragments are widely separated, it is best to expose the bone by a long incision in the "snuff-box" and excise the radial part. This should leave a useful joint.

The Effect of Nicotine on the Circulatory System.—Grassman (Munchener medicinische Wochenschrift) after carefully reviewing the experimental and clinical evidence relative to the effect of nicotine on the organs of circulation, states that the excessive use of tobacco, particularly if it be begun in youth, exerts an undoubted causative effect in the production of arteriosclerosis. Its exact influence, however, has not been accurately determined by experimentation owing to the impossibility of reproducing the associated conditions obtaining in the majority of cases in which tobacco is habitually used. Thus the common associated use of alcohol, tea and coffee, as well as the possible influence of severe bodily and mental effort, has to be reckoned with as possible causative factors in the production of the changes in the blood-vessels.

Granted thatthe excessive use of the drug favors arteriosclerosis, especially of the peripheral vessels, still it is not right to assume that the milder cardiac disturbances which it produces, such as increase in the frequency of the pulse, arthythmia, and tobacco angina, predispose to disease of the heart muscle itself and to degenerative or sclerotic processes of the vessels. So many of these disturbances disappear upon the withdrawal of the poison that they cannot be considered dependent upon structural changes.

Grassman believes that the duration of the intoxication is more important than its subjective manifestations. Thus it is conceivable that the heart might become hypertrophied as the result of increased pulse-rate and blood-pressure caused by the action of nicotine.

The use of tobacco is so general that the factor "smoking" appears in the history of a great many cases of heart disease. Whether heart disease is less frequent in those who abstain entirely from the weed than in those who use it has not been determined by the study of a large number of cases.

In conclusion the author states that he thinks too little importance has been attributed to the influence of nicotine.

Alcoholism.—Bolton (Brit. Med. Jour.) urges that the family doctor should set himself to treat alcoholism just as he would any other disease, with the full expectation of producing a cure. This has been rendered easy and feasible by the introduction of the hypodermic method of treatment. This method renders it certain that the patient gets the drug and that it enters, not the stomach only, from which it may be at once expelled, but the blood and general circulation. The regular visits of the doctor are also very important. In the acute stage of alcoholism, a very useful drug for hypodermic injection is apomorphine. In the excitement of delirium tremens a small injection of this drug will at once produce

a calm, the patient will yawn, and is fast asleep almost before he can be got to bed. This sleep is sometimes preceded by vomiting. As the patient is liable to faint if sitting up, the injection should be given when he is in a recumbent position. Usually about four hours' sleep is thus obtained. But apomorphine is no remedy for alcoholic craving; while a good way of commencing treatment, it is only temporary. The drugs to be relied on to do away with the craving for alcohol are strychnine and atropine; they should be kept in solution and the injections given into the biceps muscle twice or three times a day. The injections may cause some dryness of the throat and disturbance of accommodation; tablets of potassium chlorate will remedy the former and spectacles may have to be worn for the latter. After the patient has regained health and vigor, which will be in about two to four weeks, the injections may be cut down to once a day for three weeks longer, after which their frequency may be still further reduced. The patient should be supplied with a pick me up, to be taken when depressed or when the craving for alcohol is felt. A good one is four drops of tincture of capsicum, with fifteen drops of the liquid extract of cinchona. Careful attention must be given to the general health. Albumin in the urine is not a contraindication to the treatment; indeed, it often disappears under the treatment.

Injection of Mercury in Syphilis.—As a result of his observation Lambkin (Lancet) holds that the substitution of palmitin, which is a soluble constituent of the organism, as a vehicle for the suspension of mercury, in place of the insoluble substances hitherto in use, and the success which has followed the use of camphorated creosote as an analgesic, begin a new era in the treatment of syphilis by intramuscular injections of insoluble salts of mercury: for, in the first instance, one great objection to the treatment—*i.e.*, the introduction of insoluble foreign bodies into the circulation—is done away with, and in the second, pain has been practically abolished, even in the case of calomel.

Palmitin is a neutral fat derived from palm-oil, having the same chemical composition as the palmitin of the human system. It is an ether glyceride of palmitic acid; it is therefore easily saponified in the fluids of the organism, being converted into a soluble alkaline palmitate and glycerinin; thus it enters into the circulation not as a foreign body like all other substances hitherto used as vehicles. It is non-irritant and non-toxic; it is not so easily oxidized as the other components of human fat; and its melting point can be raised and lowered with the greatest facility. Pure palmitin, which is rather difficult to obtain, is a snowy-white, flocculent powder. The following is the formula for the injection "cream" used by the writer: Mercury, 10 grams (or calomel, 5 grams); equal parts of absolute creosote and camphoric acid, 20 cubic centimeters; palmitin basis to 100 cubic centimeters. Ten minims of the above contain one grain of mercury, or one-half grain of calomel.

Diet in Kidney Affections.—Hanssen (Nordiskt Medicinskt Arkiv.) tabulates the findings in regard to the metabolism of a number of persons on different diets. They show that the amount of solids eliminated in the urine is as large on a strict milk diet as on a meat diet. The demands on the kidneys are thus as high on a milk diet as when meat is ingested. Fats and carbohydrates, on the contrary, made far less demands on the kidneys, carbohydrates less than the fats. He confirms the reliability of the "variability test" to determine the functional capacity of the kidneys. His conclusions are that a predominant or exclusive diet of carbohydrates with a little fat is indicated in all cases in which the functional capacity of the kidneys is reduced to or below the limits of normal sufficiency. Milk and meat, providing the same amount of calories, cause elimination through the kidneys of about the same amount of molecules, while materially smaller amounts of solid elements are eliminated through the kidneys on a diet of carbohydrates with a little fat. He regards a maximal specific gravity of 1.014 or 1.015 under the "variability test" of the urine as an indication that the limits of sufficiency of the kidneys have been reached, and that meat and milk should be restricted. If the specific gravity rises higher than 1.013 or 1.011, or there are signs of retention, then meat and milk should be entirely or almost entirely suppressed. In case of uremia nothing should be allowed but gruels with milk and sugar. This takes the place of milk in regard to diuretic action.

Acute Pancreatitis.

Osler (Brit. Med. Jour.) recognizes two groups of cases of acute pancreatitis, one in which there is distinct enlargement of the gland, which may be partly due to hæmorrhage into its substance; and another group in which the gland is in a state of suppuration or necrosis. An important distinctive anatomical point is that in the acute pancreatic hæmorrhage cases there was no fat necrosis. There are three main causes: 1. A mechanical cause, as a calculus in the common bile duct leading to bacterial in-

fection. 2. A chemical cause, as bile, gastric juice, or duodenal contents. 3. An infective cause, the various pathogenic organisms living in the intestine. Infection does not result until stasis of the pancreatic juice occurs. Gallstones are frequently associated with acute pancreatitis; a favorable site for the stone is the ampulla of Vater. Bile alone, independently of infection, is unable to set up the disease. Many cases are alcoholic and show gastrointestinal disturbance, the condition being duodenitis with blocking of the duct. Mumps and typhoid fever are less common causes of acute pancreatitis. Acute pancreatitis affords one of the severest forms of the "acute abdomen." The diagnosis is often possible, the same symptoms occurring in severe hepatic colic or perforation of the stomach. A history of alcoholism and gallstones in middle aged men is of the greatest significance. Death occurs as a rule in three or four days. In the suppurative or necrotic cases the symptoms are not so urgent. The stools contain an excess of fat or fragments of necrotic pancreas. As regards prognosis, ninety per cent. of the cases not operated on, die, while of those operated on more than fifty per cent. recover. The gallstone cases are particularly fatal.

Frontal Alopecia in Graves's Disease.

Walsh (Lancet) calls attention to the occurrence of a congenital form of frontal band alopecia which appears possibly to be related to exophthalmic goitre on the one hand, and on the other to certain signs and symptoms connected with that disease. Hairlessness in the frontal region is characteristic of infants; its persistence into later life constitutes the congenital frontal band alopecia or congenital high forehead. It is far more frequent in girls than in boys. The band may be quite bald, and is almost invariably associated with boys that run backward in a line with the frontal eminences. The band may be from one-half to one inch in width; it is situated at the anterior margin of the frontal portion of the scalp, and extends from one frontal eminence to another. This congenital frontal band alopecia often runs in families and is hereditary. The author has found it, in both children and adults, constantly associated with enlargement of the thyreoid and tachycardia, nervousness, pigmentation, chilblains, epistaxis, and tremors, a condition suggesting potential Graves's disease. In eighteen cases of exophthalmic goitre, the congenital frontal band alopecia was present in all. It was present in five out of six cases of myxœdema. It may possibly indicate some evolutionary change or may be degenerative or trophoneurotic.

Ways of Entrance of Tuberculosis.

Chalmette (La Presse Medicale) in a paper read before the Sixth International Conference on Tuberculosis, stated the following to be his conclusions: 1. While the contagion of tuberculosis is perhaps experimentally possible, it is difficult to get animals to inhale the products of tuberculosis cultures in a condition of liquid spray and the inhalation of the same in dry powder produces infection very exceptionally. Hence dust infected by dry bacilli play no part in natural infection. 2. The ingestion of virulent tuberculous products or cultures in a state of emulsion gives rise to tuberculosis in all species of sensitive animals. The bacilli may pass through the intestinal mucous membrane without producing and lesions to mark their passage and be carriey with the chyle to the mesenteric glands whence they are frequently transported by the microphagic leucocytes in the current of the lymph in the thoracic duct and pass with them into the general circulation. The capillaries in the lungs then form the place most exposed to become the primary seat of the tuberculosis. 3. The evolution of the tuberculous infection is the more rapid and serious, according as the number of virulent elements ingested and absorbed is greater, and as the absorptions are repeated at shorter intervals. 4. The tuberculous lesions which result from one infection are susceptible of cure, and such a cure confers a true immunity against a new infection by way of the digestive tract. The duration of this immunity has not yet been determined. 5. Hereditary tuberculosis is extremely rare. It is always the result of an infection in utero, and can hardly be considered a factor of importance in the contagion of tuberculosis. 6. The ideas of location and of a hereditary as predispositions should be abandoned because experiments show that tuberculous infection is always possible in sensitive animals in direct proportion to the number of virulent elements absorbed and the frequency of the infections.

Modification of Leishman's Method of Estimating the Opsonic Index.

Dodds (Brit. Med. Jour.) after experiments with blood and citrated emulsion or tubercle bacilli, said the results showed marked discrepancies between the Wright and Leishman methods, a normal index working out, for instance, to 2.0 or to 0.5, and seldom exactly to 1.0. After trials in various directions it appeared that the instant factor vitiating results was the differing number of leucocytes in the respective bloods. Counts of the leucocytes, estima-

tions of the index by Wright's and by Leishman's method modified, were then made, and it was found that the figures, expressing the index by Leishman's method and the number of leucocytes, varied inversely, the emulsion being constant. By a simple formula, based on the above proposition, several apparent indices were corrected, and were then found to agree closely with those estimated by Wright's method; but still discrepancies occurred, and for the following reason: It is usually convenient to obtain blood by the pressure of an elastic or other band; if the same drop of blood thus obtained is used both for the index and leucocyte count, good results are produced. But this needs agility, and in practice would require an assistant. If different drops of blood are used, the hemocytometer and incubation pipettes may contain differing numbers of leucocytes; it is inconvenient to get blood without pressure, as a deep puncture has then to be made, possibly daily. Finally, a simple plan was hit upon; after mixing blood direct from the finger—under any pressure, with the bacillary emulsion, the number of leucocytes in the mixture itself was counted, either before or after incubation, each batch being done in the same way. For this the red blood corpuscle pipette serves, and the process is more rapid if there is one for each blood; but any pipette and any dilution desired may be used by drawing up successive volumes of the mixture and diluent as recommended by Wright. After using a drop or two to make a film the mixture is kept in its capillary tube till required for the leucocyte count. The total number of leucocytes need not be estimated, the figure expressing the average for the fields sufficing. A fallacy exists that the phagocytes are not in constant proportion to the total number of leucocytes. The actual modification of Leishman's method is very simple. The capillary pipette is that in ordinary use; it is convenient to make a bend in it 2 to 3 inches from its distal end. A rubber tube, as in the hemocytometer pipette, is easier to manage than a rubber teat, or a Wright's throttled pipette may be used. A mark is made above the bend, giving a long column of blood and emulsion, making for greater accuracy of dilution and providing enough of the mixture for its two purposes—namely, for making a film and for leucocyte count. The emulsion consists of (tubercle) bacilli suspended in citrated normal saline—say, 0.75 per cent. each of sodium citrate and sodium chloride. This emulsion is sucked up to the mark above the bend; it will be found that it is difficult or impossible to do this with a rubber teat owing to fluidity of the emulsion (unless a throttled pipette be used). The pipette may now be laid down, and the column of emulsion will be found to stay steady while a puncture is made in the finger. A short column of air having been taken up, a column of perfectly fresh uncoagulated blood is aspirated to the mark, and the whole rapidly blown out on to a glass slide, so that the citrate may at once act on the blood and so prevent coagulation; this is not so efficiently done if blood is taken up first. The two fluids are then mixed, aspirated, sealed, and incubated, unless a portion be reserved for the leucocyte count. The films are made in the usual way, by blowing out and mixing before spreading; this remixing is important if the estimation of the leucocytes is made after incubation. The film need not be fixed before staining with carbol fuchsin; the index is calculated in the usual way. To correct the apparent index, multiply the control index by its corresponding number of leucocytes and divide the result into the other index multiplied by its corresponding number of leucocytes.

Bromoform for Seasickness.

Desesquelle (Gazette medicale de Paris) recommends a saturated bromoform water, in tablespoonful doses, to overcome nausea. The dose for an adult is a tablespoonful, to be taken when the first symptoms of seasickness are felt. The entire amount used during the day may aggregate 250 grammes, at the beginning. To a child, five years of age, 40 grammes may be given for every year of the age, in divided doses during the day. From five to ten years, 200 grammes may be given during the day, in teaspoonful or dessertspoonful doses. Under three months of age, 10 grammes daily; from three to six months, 24; six to nine months, 30; and from nine months to one year, 40 grammes, daily:

Fatal Case of Angioneurotic Edema.

Bazett (Lancet) reports the case of a poorly nourished man of 33 years who was found dead from suffocation on the physician's arrival. It was learned that he had had scarlatina at the age of six years and had thereafter been subject to frequent attacks of violent abdominal colic, lasting sometimes for nearly 24 hours. Associated with them, though never apparently synchronous, occurred sudden swellings of various parts of the body—hands, thighs, and scrotum. These swellings were apparently induced by slight injuries or chills. In childhood they had attacked the face and throat but never since. No medicine had been of any avail. In the final attack swelling began after the skillful extraction of a bicuspid tooth with an apparently

healthy gum. In twelve hours the cheek began to swell on that side, the swelling extending over the face and eyelids. Toward night of the same day the neck began to swell and then the throat. During that same night he awoke choking, sprang up, and tried to clear his throat with his finger, but died in the suffocating attack. A diagnosis of angioneurotic edema was made by the reporter and was concurred in by several physicians who saw the case. There was no family history pointing to any hereditary influence. Autopsy, 24 hours after death, showed some edema of the larynx on the ary-epiglottic folds. Immediately after death the structures around the faucial aperture were swollen and this swelling increased during the 24 hours succeeding death, but had nearly disappeared by the time the autopsy was made.

Tuberculosis of the Inner Genitals in Early Childhood.—Hohlfeld (Zentralbl. f. Gyn.) publishes an account of the post-mortem examination of two children where this condition was found, though it was associated in both with tuberculosis elsewhere. The first subject was a girl aged three. Her father and infant brother had both died of tuberculous disease. She herself had been taken into hospital seven months before death on account of attacks of vomiting; tuberculous peritonitis and enteritis were correctly diagnosed. At the necropsy Hohlfeld detected advanced tuberculous disease of the cervical, bronchial, mediastinal, and mesenteric glands, and a few foci in the liver and in one lung. The intestines and peritoneum were much involved. The Fallopian tubes were thickened and bore prominent yellow swellings; miliary tubercle was detected not only in one ovary, but also in the muscularis and mucosa of the uterus. The second subject was a girl one year and seven months, an only child of a mother who died in the puerperium and of a father said to be delicate. She herself had undergone a successful operation for tuberculous disease of the bones of the fingers and metacarpus, dying, after recovery, from an attack of double pneumonia. At the necropsy miliary tuberculosis of the spleen, liver, and peritoneum were discovered, as well as a caseous bronchial gland, and a tuberculous ulcer in the colon eight inches below the ileo-cecal valve. The uterus, as in the first case, was distinctly involved in the general disease, the endometrium being in a state of caseation, breaking down into the uterine cavity. The right ovary was converted into a tuberculous mass of the size of a hazel-nut.

Syphilis of the Heart and its Early Diagnosis.—Herzog (Berlin Klin. Wochen.) believes that too little stress is laid upon the luetic origin of certain cardiac disturbances, and calls attention to a train of symptoms occurring suddenly in young people, which he thinks almost invariably points to lues and that these cases should be given an anti-luetic treatment. The symptoms are those of pain in the cardiac regions, often radiating, difficulty in breathing, high blood pressure, Musset's symptom, accentuation of the second aortic sound, increased blood pressure in the radial, a wide, tumultous apex beat. These symptoms point to disease of the aorta, or coronary arteries. Every severe case of angina pectoris in young people or those of middle age, as well as moderate symptoms of precordial pressure, and fear, in those who were previously well, should always prompt one to think about the possibility of lues. These cases often yield to anti-luetic treatment, as is definitely shown by the cases he reported.

A New Test for Tuberculous Pus.—Mueller (Centralbl. f. inn. Med.) says that hitherto the Mueller-Jochmann method has been our only means of distinguishing macroscopically between tuberculous and non-tuberculous pus. When a trace of the pus is placed on some sterile coagulated blood-serum and the latter put into the incubator, no change takes place if the pus is tuberculous. Pus due to the ordinary pyogenic bacteria, on the other hand, will form a small cup-shaped depression in the culture medium. This is due to the fact that ordinary pus contains a proteolytic ferment that can digest the blood-serum, whereas this ferment is lacking in purely tuberculous pus. The writer has succeeded in greatly simplifying this test. A drop of the pus is allowed to fall into a small vessel containing some Millon's reagent. Ordinary pus forms a little lump that soon disintegrates and colors the liquid bright red. Tuberculous pus, on the other hand, forms a tough skin on the surface of the fluid, which, if pushed down, takes on a globular shape. It is not dissolved and does not color the fluid. The explanation of this phenomenon is the same as that of the older test. Tuberculous pus contains chiefly albuminous bodies that form a firm coagulum with Millon's reagent. The proteolytic ferment in ordinary pus, however, digests its own proteids with the formation of albumoses and the like. These diffuse into the Millon's reagent, disintegrating the coagulum and giving rise to the characteristic red color.

Fractures of the Cervical Column.—Hochenegg (Lehrbuch der speziellen Chirurgie) says that fractures of the cervical

vertebræ very frequently remain unrecognized. This is partly due to the fact that numerous individuals succumb to this injury, either immediately or after prolonged collapse; and partly because examination is omitted. This neglect is due to a certain extent to the erroneous assumption, prevalent among physicians also, that fracture of the cervical vertebræ must be necessarily followed by death, or by symptoms leading to a fatal outcome. Hence these injuries, when not associated with a lesion of the cord, do not even suggest the idea of vertebral fracture. Again, the difficulty of examination is so great that even the most experienced practitioner may be unable to discover an actually existing vertebral fracture. For these various reasons, the danger of these injuries is probably over-rated, statistics being based as a rule only on those cases which have been clinically recognized. Although all cases of vertebral fracture are serious enough, the danger is very considerably increased in simultaneous lesion of the spinal cord. Total contusions of the cervical cord are either immediately fatal, or induce death within a few weeks. Vertebral fractures without lesion of the cord may subsequently give rise to spinal phenomena through proliferation of scar tissue, or giving way at the point of fracture as the result of premature functional requirements. Since that part of the spinal cord from which the first pair of dorsal nerves is given off still lies within the area of the cervical column, the nerves ramifying in the area of the arms, the cervical cord may be identified with the nerve supply and distribution of the arms.

Destruction in the four highest segments, still affecting the root area of the phrenic nerve, it is immediately fatal through arrest of respiration. All the respiratory muscles, together with the diaphragm, are paralyzed. If the cord is destroyed below the origin of the phrenic nerve, only the costal respiration ceases, whereas the abdominal coverings and the diaphragm continue to work. Milder contusions in the fourth or a higher segment cause the respiratory sounds on the paralyzed side to cease, the diaphragm taking the cadaveric position, meaning that it is pushed up by the intestines. It is remarkable that all this passes unnoticed by the patient, because there is no dyspnea. The blood as well as the secretions accumulate in the quiescent lung, promptly giving rise to pneumonia. In those cases where only the sixth cervical segment has been destroyed, there develops a characteristic position of the arm, resembling the attitude of boxers at the beginning of the fight. This fixed position is brought about in such a way that the muscles supplied by the uninjured fifth segment (coracobrachialis, biceps, brachialis internus, deltoid, supinator longus and brevis) gain the ascendancy over their paralyzed antagonists, with the result that the arm is abducted and rotated inwards, the elbow is flexed, and the forearm is supinated. When the first dorsal segment is destroyed, so-called main-en-grippe (claw-hand) results, due to paralysis and atrophy in the area of the ulnar nerve.

The body temperature after injuries of the cervical cord frequently undergoes considerable changes on account of vaso-motor disturbances. The pulse and the respiration are not always affected in a parallel manner. Rapidly increasing hyperpyrexia is of grave prognostic significance. Changes in the pupils are absolutely characteristic of cervical cord injury, but of no value for the identification of the injured segment, being observed even after injury of the first dorsal segment. It is extremely important, on the other hand, to determine if both pupils are affected, or only one, because in the former case the spinal cord must be damaged in the entire cross section, which means a bad prognosis. Irritation of the oculo-pupillary fibres gives rise to mydriasis, whereas paralysis causes myosis. Differences may be discovered in the palpebral cleft, in winking, or in the tension of the eyeballs, but importance attaches only to reflex rigidity of the pupils, unilateral ptosis, and difference in the two pupils. The corneal reflex is inhibited by total lesions down to the seventh cervical segment.

The essential features of the treatment consist in the position of the patient and the fixation of the head. In all severe fracture cases, extension upon a firm mattress, which must be perfectly horizontal, is recommended. Should counter-traction be required, on account of the traction upon the head, the foot-end of the bed may be raised for the purpose, but the head must never be lifted with cushions. The materials employed for the extension should be reliable, so as to guard against sudden movements of the neck on account of giving way of part of the appliances. A pasteboard collar suffices in mild cases, or for the after-treatment.

Genu Valgum.—Ghillini (Il Policlinico) says genu valgum is a deformity produced by a different level of the condyles of the tibia and the femur, this difference being the result of the variable formative activity of the epiphyseal cartilages (upper of tibia and lower of femur) at their respective localities. This formative activity is produced by various stimulating factors. The point of origin of genu valgum is accord-

ingly the epiphyseal cartilage. The deformity of the articular surfaces of the knee is followed by deformities of the diaphysis of the femur and the tibia, because the diaphyses, being placed outwards, have changed their static relations, and this results in curvatures, which constitute a functional adaptation in the altered conditions of the epiphysis.

The functional or compensatory adaptation of genu valgum accordingly takes place in the diaphyses of the tibia and the femur, which become deformed in proportion to the changes of the knee-joint. Upon the basis of this assumption the spontaneous cure of this deformity, as well as its correction by means of orthopædic appliances and the graded redressment according to Wolff, are readily accounted for.

Ghillini explains the spontaneous cure of these deformities by the fact that the patients try to facilitate walking by approaching the foot toward the median line of the body, so that the center of gravity passes through the foot. Bilateral deformity of a certain degree of severity causes the patients to push one knee across the other in walking. This inward displacement of the foot aims at placing the knee in the position of genu varum, and in this manner the lateral half of the joint, viz., the articular surfaces of the condyles, are removed, while the median parts are more exposed to pressure. Extension in space of growing bone is impeded by pressure upon the epiphyses, according to the investigations of Ghillini and also of Maass, whereas an increased growth of the bones is produced by removal of the weight. In this manner a change of the bony growth is brought about, production being increased on the lateral side and diminished on the median side, thus inducing the subsidence of the obliquity of the articular surfaces and the adjustment of the difference in level. The altered or improved relations of the articular surfaces are followed by changes in the static relations of the leg (tension by pressure and traction), which improve the curvatures of the diaphyses caused by the deformity.

Acute Rheumatism in Children.—Hawthorne (British Journal of Children's Diseases) says that few subjects present so many questions for debate, that it has only been within the past few years that the frequency of rheumatism in childhood has been recognized, notwithstanding the fact that "the most complete and comprehensive manifestation of the various phases of rheumatism belongs to the period of childhood."

Another general question is, "Why does the picture of acute rheumatism in the child differ so conspicuously from that of the same disease in the adult?" Is it because certain tissues in the child are more susceptible and others more resistant to the rheumatic poison than are the corresponding parts in adults? However, in making the diagnosis, we are confronted with the fact that there is no standard by which we can label various clinical incidents as rheumatic, for instance, in adults there are many causes of arthritis recognized, especially a well-defined febrile disease associated with articular disturbances—affecting, for the most part, many joints—and with abundant sour-smelling perspirations, but in children this symptom-complex is but seldom seen. Continued high temperature is uncommon, joint disturbances are but slight, and free sweating infrequent. There is, however, a class of cases between these two extremes that are no doubt rheumatic, cases that yield readily to anti-rheumatic treatment. These mild cases often cause the most harm, the pain in the joints being so slight that the children are not put to rest, so needful a prophylaxis against endocarditis. In many cases only the joints of the fingers and toes are affected.

The author questions as to "What shall be said of the vast multitude of other phenomena which are not presented as expressions of rheumatism in the early years of life—of tonsilitis, pleurisy, bronchitis, pneumonia, chorea, nervousness, anemia, purpura, abdominal pains, epistaxis, nephritis, erythemas, subcutaneous nodules, phlebitis, enuresis, meningitis, orchitis, periostitis, perityphlitis, and the rest? For many of these a good case may certainly be made out, at least to this extent, that more or less occasionally they occur with the cardiac, febrile and arthritic evidence of the disease. In such circumstances the conclusion in favor of a rheumatic interpretation is a fairly strong one."

In regard to treatment the writer uses salicin, in moderate doses; also the organic salts of potassium or sodium, until the urine becomes alkaline. Early and prolonged rest is without doubt most effective against cardiac complications; due attention should be paid to clothing, domestic hygiene, and climate.

The Cry of the Nursing Infant.—Garriere (Rev. Fran. de Med. et Chir.) says that children rarely cry without cause, and by the cry one can recognize whether it is from some external or an internal cause. The most frequent cry is that of hunger; the next that of pain; a search for some cause will reveal a pin or some such cause. Dentition is the cause when the child grinds its gums and they are seen to be red. Rarely

one will find children that are natural criers. Internal causes include erythema of the buttocks, suppuration of the cord, or the mammary glands, and bony affections, such as fractures, luxations, periostitis, or ostitis. Acute adenitis and torticolis are affections of the neck that cause pain. Stomatitis or angina are other causes. Gastrointestinal causes are many. Dyspepsia is accompanied by vomiting. Hyperchlorhydria comes after nursing and is relieved by lactation. Hypochlorhydria comes at the end of digestion. Dilatation of the stomach is shown by copious vomiting at the end of digestion. Enteritis and intestinal dyspepsia, with colic, are frequent causes of crying. Other causes are intestinal worms and strangulated hernia. Having examined into all these causes phimosis or erosions of the vulva may be sought. Vesical spasms and nephritic colic may occur. Next search for ear troubles, peritonitis and meningitis with hydrocephalus. There are many serious pathological conditions to be eliminated before one can say that the infant has no cause for crying.

Treatment of Rheumatoid Arthritis.—Midelton (Lancet) commends the use of blister counter-irritation applied in the regions of the cervical and lumbar enlargements and gives the notes of five cases out of a series of twenty. His results have been better than from other methods. Several of his cases were extremely feeble, but no ill-results followed the applications. In one insrance a patient much subject to dysuria had some strangury, but it was temporary and yielded to copious drinking of water and the internal use of hyoscyamus. This therapy was some time ago recommended by Latham, who believes that the lesions in the joints are the results of irritative and destructive conditions in the regions of the cord named. The author is not altogether in accord with this view as he regards the disease as due in some measure to a cerebrospinal toxemia. Latham based his views on the fact that first clinical experience has taught that injuries to the spinal cord or even to the nerves of a limb will set up arthritic changes which cannot readily be distinguished from those seen in the earlier stages of rheumatoid arthritis. And second that pathological facts appear to show that the trophic nerves of the bones and joints are found in the mixed nerve trunk, and that they issue along with the motor fibers from the anterior cornua of the spinal cord, where they are, like the muscular trophic fibers, connected with a group of large caudate cells, and that it seems now generally admitted that both irritative and destroying lesions of the ganglion cells of the anterior horns of the spinal cord and their homologues in the medulla oblongata, pons, and crura, or of the efferent fibers which unite these cells with the periphery, may give rise to active atrophy of muscle.

Prevention of Valvular Disease.—Caton (British Medical Journal) says that, in acute rheumatism, the inflammatory changes in the joint tissues and the endocardium respectively are like in kind, but the essential treatment of rest is not equally possible of application. The work of the heart varies with times and circumstances, however, so that within limits the amount can be regulated, if sufficient trouble is taken. Pain and fever can be lessened by adequate doses of some salicyl compound or other measure appropriate to the condition. Absolute rest of body and mind, light diet, a gentle sedative in sleeplessness, fairly full doses of sodium or potassium iodide three or four times daily, to aid absorption, lessen the volume of the blood and diminish blood-pressure. These measures slow the heart and diminish its amount of work. Secondly, through the first four dorsal nerves, in their distribution between the clavicle and the nipple, the trophic and vasomotor nerves of the heart can be stimulated without exciting the muscle fibers. This is effected by small blisters, applied one by one. The rest treatment is the most important and must continue for six or eight weeks, or even longer, and it must begin early, before marked structural changes occur. This depends on a capacity to recognize the advancing stages of valvular disease in the making. The normal first sound at the apex consists of two elements: (1) The less important muscle sound; (2) the crack of the stretched valve ducts made taut by the sudden high pressure of the blood-stream under the powerful squeeze of the ventricle. Thickening and stiffening of the valve membrane from inflammatory change with subendothelial effusion, and the formation of vegetations, gradually change the clear sound into a longer and duller one, eventuating in a whiffing sound that ultimately develops into a real regurgitant bruit.

Cardiac Epileptoid Attacks.—Clarke (Brit. Med. Jour.) says that attacks of tachycardia may last for hours, days, or weeks. After a variable interval the heart tends to become exhausted, and irregularity occurs—in short, heart-block takes place. Stops are felt in the radial pulse, concurrently nervous symptoms arise which vary from the slightest feelings of sparks flashing before the eyes or the waving of a sheet before the patient, to severe epileptiform convulsions, with loss of consciousness,

Yet such attacks are most certainly not epileptic.

From his study of such cases, the writer concludes that tachycardia is a pure neurosis, characterized by a great increase in auricular contractions from disturbed nervous influences. After a time, from overexertion, fatigue or conductivity of the band of His occurs; missed impulses result, causing longer or shorter delays in the ventricular contraction. When these delays are sufficiently prolonged, cerebral anæmia is caused, followed in due course by the nervous symptoms described. Tachycardia being a neurosis, it is, like other neuroses, commonly recovered from. The condition may persist for years, and recovery may be complete, or relapses may occur from time to time. In bradycardia we cannot be hopeful, the ventricular pauses being due to serious structural changes in the band of His. Sclerosis of the vessels, fatty degeneration of the fibers, and an abnormal increase of fibrous tissue in the bundle have all been found. The condition is never recovered from, and the chances of sudden death from prolonged cessation of the ventricular contraction should not be forgotten. Life in true bradycardia is rarely prolonged for more than three or four years.

As regards treatment, rest, both physical and mental, so far as possible, is of the greatest importance. The head should be kept low and the foot of the bed raised. Any deviation from health, such as indigestion, constipation, gout, rheumatism, etc., should be attended to. Massage may also be employed. Bromides have no effect in tachycardia, either in lowering the pulse-rate or in controlling the fits. Nerve tonics, such as valerianate or oxide of zinc, seem to do good. Strychnine, atropine, and alcohol are better avoided. In bradycardia strychnine hypodermically, with heart tonics, such as digitalis or strophanthus, are sometimes helpful. Potassium iodide apparently brought about recovery in one case.

Contagion of Cancer.—Butlin (British Medical Journal) says the accumulation of knowledge of the last few years enables us to formulate, much more definitely than we could before, the conditions under which cancer is likely or unlikely to be accidentally communicated from one human being to another. All cases of reputed contagion of cancer in which the disease is not of the same variety must be unhesitatingly rejected. Cases must not be accepted where there is no evidence that the affected parts of the two individuals were from time to time in contact. It is extremely improbable that contagion would take place from a covered cancer, such, for instance, as a cancer buried in the breast, or that the disease could be implanted in a part the covering of which has not been broken. These exclusions largely limit the number of possible cases of contagion, and the limitation is still greater when it is taken into account that sepsis of the tumor or of the broken part which comes in contact with it is an almost absolute obstacle to the success of accidental implantation. For it is notorious that cancers which are exposed for the most part rapidly become septic and ulcerate and suppurate.

The best evidence of the contagiousness of cancer is furnished by the occasional examples of successful implantation in different parts of the body of the same individual. Such cases have long been known under the name of autoinoculation. Probably the best example is where a squamous-celled carcinoma on one labium of the vulva of a female affects the opposite one, whether it be the labium majus or minus. It affects the opposite side of the vulva by direct contiguity as surely as a condyloma. Time only is necessary, and a certain amount of moisture, to make it invariably the rule. The writer gives details of fifteen cases of autoinoculation of cancer, undoubted and apparent.

For some years past surgeons have been more cautious than they used to be in dealing with cancerous growths, and many cases have been recorded in which there was reason to believe that recurrence was due to implantation during the operation rather than to imperfect removal of the disease. Cancers should not be cut into unless for diagnosis, and the wound should be tightly closed before the actual operation is commenced. The instruments which were used for the purpose of diagnosis must not be used again until they have been boiled. Exposed or ulcerated cancers should not be pressed against or dragged across raw surfaces made in the course of the operation. And care should be taken that breaking-down cancers should not be opened during operation. If they are opened by mischance, means should be taken to cleanse the surface of the wound and destroy the exuded contents of the cancer cavity.

Pneumococcus-Peritonitis in Children.—Koos (Arch. f. Kinderheilk.) says that two forms of pneumococcus-peritonitis are recognized in childhood, an encapsulated and a generalized purulent peritonitis. The disease always has an acute onset with severe abdominal pain, high fever and vomiting. The pain is usually diffuse. In some cases an additional symptom consists of numerous watery, odorless stools. Herpes-

labialis is found in some cases. In the course of the encapsulated form, the acute symptoms ordinarily begin to disappear after 3 to 7 days. In the second stage it is then possible to determine the presence of fluid in the abdomen. A differential point between this form of peritonitis and the tubercular form, is that fluid can be made out very much earlier in the pneumococcus form. Spontaneous rupture occurs in many of these cases, particularly in the encapsulated form, the pus escaping in most cases through the umbilicus, though it may escape through the vagina. If there is no spontaneous rupture and no operative interference there follows, from the retention of the pus, the picture of a severe septic infection. The differential diagnosis between the generalized form and appendicitis is often not to be made. With reference to the etiology, it is to be noted that the infection may be secondary or primary. Secondary infection occurs as a result of primary pneumococcus infection of the lungs, bronchial tubes, pleura, middle ear, testis, etc. Primary infection probably always occurs through the medium of the intestinal tract, though it is possible that in female children, infection may also occur through the genitalia. Indeed, it is noteworthy that of 72 reported cases, 58 occurred in girls. The prognosis of the encapsulated form is not bad if the diagnosis be made and early operation be had. Of 69 reported cases, 51 were of the encapsulated variety. Of these, 4 died, a mortality of only 8 per cent. Of 18 cases of the diffuse form, 14 died, a mortality of 77 per cent. Treatment in both cases is purely surgical, consisting in the evacuation of the pus and drainage, though it is noteworthy that if the operation can be postponed until the second week, the outlook for recovery appears to be much better. The indication for the operation is therefore to be made dependent upon the presence of the fluid exudate.

Surgery of Tuberculous Cervical Glands —D'Este (Il Morgagni) discusses the different ways of treating tuberculous cervical glands, especially excision and the injection of iodine. Since many cases recover completely with no other than dietetic and hygienic treatment, it seems unreasonable to advise free excision for cases with infection of only a few small glands. The advocates of iodine as the best treatment for all cases advise that intractable cases shall be finally submitted to more radical operations. He considers that both schools have exaggerated somewhat. He does not deny the existence of great benefit to be derived from the hypodermic or parenchymatous injection of iodine preparations, but he decides that when the glands are large or numerous or painful or matted together, and still more when they are caseous or suppurating, treatment should begin with excision of the affected glands, unless there is any formal contraindication of operation. Recognizing a special rather than specific action of iodine in increasing the general organic resistance to tuberculosis, he considers that the two forms of treatment should be used together in all suitable cases, and he records a number of cases chosen to test his opinion. He does not regard an apical catarrh as a reason for not operating, and quotes Blos's record of sixteen cases operated on while suffering from incipient phthisis, and afterwards found to have recovered completely. The contraindications which he does admit are miliary tuberculosis of the lung, multiple visceral and articular lesions, and an extremely bad general condition. In some cases operation was refused or complete extirpation was considered to be unsafe. An unsatisfactory scar is much more common after partial operations than after complete dissection of the infected glands. Relapse is due to incomplete removal of the diseased area, and is therefore to be attributed to the operator rather than to the operation.

The author divides his own cases into three groups: (1) Eleven cases of radical treatment in its widest sense, all the glands which could be reached by minute and patient dissection being removed. (2) Twelve cases in which similar radical treatment was re-enforced by distant intramuscular iodine injections as described below; seven of these patients were in the same group as those in the first group and the remaining five were in a much worse state. (3) Seventeen cases for different reasons could only be treated by incision and scraping or shelling out the glands, in addition to iodine treatment. The first group of patients recovered with only one relapse, and that in a very severe case more than a year after the first operation. The second group recovered without any relapse during the two years that the patients have been under observation. In the third group there were four cases of relapse, or rather of a continuation of the original disease, which could not be entirely removed by the defective method employed. The author attaches great importance to removing all the diseased skin, so that the scar is the line of union of two pieces of healthy skin. After the first incision he uses chiefly a pair of scissors with blunt ends. The different planes of tissue are finally sutured separately with fine catgut, so as to leave no empty spaces, and so that there may be no unnecessary tension of the skin. When in

the course of operation the jugular vein is wounded he treats it by lateral suture or ligature, but he describes the operation of tieing the vein as free from danger. The iodine preparation contains pure iodine, 1 part; iodide potassium, 10 parts; anesthetic guaiacol, 5 or 10 parts; glycerine, 100 parts. Of this 1 cg. was injected at first, and the amount subsequently increased to 7 cg. or less, from ten to thirty-nine injections being made altogether. In some cases injections were made for some days before operation; in others they were begun directly after operation. Some account is given of each case belonging to the first two groups. The cases of the third group are not reported in detail. The less satisfactory results in the third group show that the success obtained with the second group was not simply the result of the iodine treatment. The writer considers that the method of injection of iodine into the gluteal or lumbar muscles is the best of all means of introducing iodine into the system, and may be safely employed at all ages.

Strangulated Hernia and Rectal Cancer.—Verdelet and Griewauk (Gaz. Hebd. des Sci. Med.) report two cases of rectal cancer in which the development of a strangulated hernia was the first sign which led to the recognition of the rectal trouble. The first patient was a man of 52, who since twenty-eight years of age had had a right inguinal hernia; this had been kept up by a bandage. Four days before being seen by the authors he had been seized with acute pain at the neck of the hernia, and he found that the hernia had pushed its way beneath the bandage; attempts to replace the hernia were unsuccessful. He remained at work for four days afterwards, but at the end of this time the continuance of the pain, the irreducibility of the hernia, the presence of nausea, enlargement of abdomen, and constipation compelled him to call in a doctor, who diagnosed strangulated hernia, attempted taxis, and ordered a purgative, without, however, any beneficial result. The patient at this time was ill, with pinched features, cold extremities, and rapid pulse. The abdomen was considerably distended and very painful to the touch, especially at the level of the hernia. The hernia itself, however, was only slightly tense, soft, and scarcely painful.

Operation was carried out at once and the hernial sac opened up; there escaped at once a considerable quantity of seropurulent liquid, which appeared to come from the abdominal cavity. The sac contained a large piece of the great omentum, which was excised. As there were signs of peritonitis a lateral larapotomy was performed by prolonging the original incision. Seropurulent peritonitis was present, and the fluid was of a fecal odor, and free gas was present in the peritoneum. A perforation of the small intestine was found; this was closed by suture, and for precaution this loop was fixed to the abdominal wall, so as to obtain an artificial anus, if the sutures closing the perforation gave way. The operation wound was then closed. The next day an artificial anus had formed, but the general condition of the patient was better. One month later the patient had regained his health, but the artificial anus still persisted, in spite of several attempts to close it. Nine months later the patient found difficulty in getting his bowels to act, and at a second operation it was found that he was suffering from cancer of the upper part of the rectum, which was considered unsuitable for operative interference.

The second case was a man, sixty-nine years of age, who had had for as long as he could remember a small right femoral hernia, which had always been reducible, and for which he had never worn any truss or bandage. Six days before being seen by the authors his hernia became slightly painful, and he felt sick. On the day when the authors saw him vomiting began and absolute constipation had set in. On examination there was found a rather tense and painless right femoral hernia. At operation there was found a large prehernial lipoma, beneath which was a coil of small intestine, slightly congested. The usual operation for femoral hernia was performed, and progress of the patient's condition was good. The bowels, however, could only be made to act by the use of mild purgatives and rectal enemata. He left the hospital three weeks later, apparently cured. A week later he complained of obstinate constipation, and on examining the rectum there was found an epithelioma of its upper part, for which it was considered no operation was advisable. As to whether in these two patients the occurrence of cancer of the rectum and of strangulated hernia was a coincidence or whether they may be considered as cause and effect, the authors are unable to decide. The history of these two cases, however, emphasizes the importance of examining for neoplasm in cases of old people who have had for years a hernia which had given them no trouble until it had suddenly become strangulated.

Imperforate Hymen.—Guinard (Journ. des Practiciens) gives the history of a case of imperforate hymen. The patient, a girl aged fifteen, had been subject for some months to severe epistaxis. Her abdomen on examination was found to be swollen,

and palpation revealed an enormous tumor, pear-shaped and rising above the umbilicus, soft and fluctuating. It was like a gravid uterus of seven months. The girl had never menstruated. She was seized two years ago with severe pain in the abdomen. She had frequently had the wish to make water, but for some weeks past had had some difficulty in micturition. Diagnosis in these cases often favors an ovarian dermoid cyst with a twisted pedicle or tuberculous peritonitis. But a speculum clears up the diagnosis at once. The vulva in this case was perfectly formed. On separating the labia majora a bluish curved surface came into view, convex forward, just like the head during labor. At each sigh of the patient this surface grew and stretched. In the middle line was seen a frenum of a reddish color which united the lower pillar of the vagina to the urethra. The hymen was opened by scissors in a transverse direction, and about 1½ liters of thick brown liquid, just like chocolate cream, was forced out violently. The liquid was contained in a very much distended vagina. The patients nearly always consult a medical man for vague abdominal pains, or for epistaxis, or frequent desire for, with difficulty of micturition. Another point to notice is that sometimes the opening of the hymen infects the distended vagina, and a purulent vaginitis is the result. A simple incision followed by injections usually effects a cure. A similar dilatation of the uterus is a very rare event.

Death During Expulsion of Fetus.—Remy (Rev. Med. de l'Est) discusses the harmful effect which the efforts made by a woman when expelling the fetus may have upon the cardio-respiratory system when heart lesions or pulmonary phthisis are present. The uterine contractions are aided by the voluntary efforts of the woman. During these efforts the glottis is closed, and the thorax, which is filled with air, is fixed so as to give support to the abdominal muscles. The left heart is thus pressed upon by the distended lungs and is not able to receive and distribute the blood brought to it by the pulmonary veins. It follows that stasis is experienced in the vessels of the lungs, and the right heart, being unable to expel the blood coming to it from the venæ cavæ, becomes dilated, and the veins becomes engorged, as is evident from the swelling of the jugular veins. When a right heart already suffering from disease is distended in this manner it is liable to collapse and cause a fatal syncope. It is useless to advise a patient not to make expulsory efforts, for when she becomes aware of the pressure of the fetal head upon the pelvic floor she is unable to resist the impulse to bear down. The best course to adopt is to apply the forceps and deliver her promptly; in this manner the whole process is shortened and the efforts which might have a prejudicial effect are suppressed. It is not always easy to put this advice into practice, for the physician may not arrive in time or death may supervene before he has a chance of intervening, as the reported cases show.

A lady who had had serious dyspnea at her previous confinement came for advice during her next pregnancy; she had a feeling of oppression, epistaxis, and pallor, but no albuminuria, and her pulse was regular. She kept about till labor began, during the period of dilatation she remained in bed, and experienced no difficulty. As soon as dilatation was complete the midwife sent for the medical adviser, but with the first expulsory effort the patient had a feeling of suffocation and succumbed after a few attempts to inspire. The fetus was promptly delivered by forceps, but it was not possible to reanimate it. There was a lesion of the mitral valve, and a single effort had been enough to induce a fatal syncope.

Cystitis in Nurslings.—Caccia (Riv. di Clin. Ped.) after observing fifteen cases of cystitis in nurslings, describes the condition as rather frequent. He believes that it is not generally diagnosticated, but the symptoms are confused with the same ones appearing in cases of gastrointestinal diseases. They are fever, pain, and turbid, acid urine, full of bacteria and agglutinated leukocytes, odorless and containing little albumin. The causes in general are the same as in adults. It may be caused by the presence of various bacteria, among which the most interesting and important is the colon bacillus. This may come by ascending infection, in females from the vagina, in males on account of a phimosis. Of the author's six male cases all had phimosis, which caused secretions and bacteria to be retained. The author discards the theory of the germs coming through the walls of the colon, and considers that the disease is rarely hematogenous or descending. The most satisfactory treatment is by urotropin or helmitol, and a cure will be obtained generally without washing out the bladder. The prognosis, even in untreated cases, is good, as the disease usually ends in a cure.

Cerebral Embolism in the Course of Postdiphtheritic Cardiac Weakness.—Escherich (Wiener Med. Woch.) assumes that in two cases under his recent observation, thrombosis developed as the result of

cardiac weakness, being followed by embolism of cerebral vessels. The first patient was a child two years of age, who was admitted to the hospital in a condition of severe collapse, with paralysis of the right half of the body. On the next following day, the lower extremities were held in rigid extension, with some slight motions of the right arm. Consciousness was apparently preserved. One day later the patient presented a livid discoloration with analgesia of the legs. Reaction to painful stimuli could be elicited only in the upper third of the thighs, the right leg being observed to present a spastic paralysis. The eyes were deviated towards the left. The patient died during the night, and the autopsy showed the presence of embolism of the left median cerebral artery, with recent white softening of the left cerebral hemisphere.

The second patient was a child nine years of age, who three weeks after a severe attack of diphtheria presented total paralysis of the palatine velum and of the accommodation. There was a very sudden apoplectic seizure with general convulsions. The four extremities are said to have been paralyzed immediately after the attack. In the course of the next few months, the paralysis subsided on the left side, whereas spastic paresis persisted on the right side of the body. The right angle of the mouth was distorted and unable to keep up with the movements of the left side. The muscle tissue of the right arm was in a state of increased tonus and appeared somewhat hypetrophied. The arm was held rigid, and its movements were considerably slower and more awkward than those of the left arm. In walking, the patient presented the phenomena of athetosis; the right leg remained in extension and dragged behind. The patellar tendon reflexes were increased and there was dorsal clonus on the right side. These clinical phenomena must be interpreted in such a way that as a sequel to severe pharyngeal diphtheria there appeared a typical series of post-diphtheritic paralyses, simultaneously with post-diphtheritic weakness of the heart, leading to thrombosis and embolism of a cerebral artery on the left side of the brain.

Observations on Arthritis in Young Children.—Poynton (Edinburgh Medical Journal) mentions as varieties gonnoccal, virulent septic, meningococcal, acute tubercular, arthritis associated with pneumonia, acute rheumatism, the arthritis described by Still, hemophilic and syphilitic.

He emphasizes the difficulty in diagnosis as the condition may be a simple arthritis, epiphysitis, or a combination of the two, or as in some cases where there is immobility of the affected limb without any notable arthritic swelling, it may simulate infantile paralysis.

Relative to gonnoccal arthritis he believes the examination and culture of arthritic exudations are imperfect guides in diagnosis for the exciting causes lie in the synovial tissues rather than in the synovial fluid.

Arthritis may be present in meningitis either in the epidemic or post-basic form, as permanent and marked features of the disease and not, as is usually the case, a secondary symptom of comparatively little moment. The effusion in these cases may be either intra- or peri-articular and he compares the intra-articular form with hydrocephalus, the distention of the ventricles of the brain and the distention of the knee-joints suggesting that both conditions are the results of the toxin irritating the lining membranes of the respective cavities.

He considers the tubercular form and the form associated with pneumonia as being rare under five years of age as also is acute rheumatism, although this form may be presented with stiff neck as the only symptom, thereby suggesting spinal caries, but which yield to treatment with salicylates.

The arthritis described by Still is peri-articular in type and characterized by a chronic progressive arthritis, enlargement of the spleen, enlargement of the lymphatic glands and resulting in deformities.

Miscellaneous.

So great has been the demand the W. B. Saunders Company, the medical publishers of Philadelphia and London, have found it necessary to issue another revised edition of their illustrated catalogue of medical and surgical books. In looking through the copy we have received, we find that since the issuance of the last edition six months ago the publishers have placed on the market some twenty-five new books and new editions—truly an indication of publishing activity. The colored insert plate from Keen's new Surgery, which enhanced the value of the former edition, has been replaced by a new one from the second volume of the same work, and this alone gives the catalogue a real value. A copy will be sent to any physician upon request.

"The physician who assumes the responsibility of prescribing for his patient surely has a perfect right to demand of all things, —honesty, uniformity and efficiency." This being true, the announcement of The Cloft-

lin Chemical Company concerning "Emulsion Cloftlin," made elsewhere in this journal, will be of interest to the particular physician. An examination of their literature, which they furnish on application, with liberal samples for clinical test, clearly indicates that nothing has been left undone to make this preparation conform to the highest standard of professional demand.

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Tongaline or Tongaline and Lithia Tablets by rapidly expelling the poisons which are the source of the complaint will secure most beneficial results.

Ethical Elegance.

To obtain an antiseptic and germicide the equal of bichloride and carbolic without their dangerous features, has been a great study with the friends as well as the foes of these two corrosive agents. Dr. Tyree believes the problem is solved by the clinical and scientific tests made with Tyree's Antiseptic Powder. These tests, with the opinions of gentlemen eminently qualified to pass upon the therapeutic value of any chemical agent, are embodied in an interesting little booklet, entitled George Washington's Physician, which will be sent free. While Tyree's Powder has hitherto been largely confined to obstetrical and gynecological work, careful experiments in the hospitals of this country and London, indicate its equal value in general, rectal, laryngeal and oral surgery, whether of operative or mechanical application.

Should you feel sufficiently interested, the doctor will, upon request, mail a sample of this great antiseptic. In this connection he assures the profession that this is not done with a view of securing names for publication. This is never done, as his antiseptic is strictly an ethical one. His sole object is to acquaint the profession personally with the great value of this remedy. For samples and descriptive literature, write Dr. J. S. Tyree, Chemist, Washington, D. C.

From The Creighton Bulletin.

It may seem superfluous at this time, when the market is already overcrowded with a constantly increasing list of analgesics and anti-pyretics to offer another to the profession, but I have no apology to make to the profession for the formula known as "Cealgic," believing that a careful trial will furnish convinciug proof of its superiority over all combinations of this class. All the hitherto offered combinations of the coal tar series possess some degree of merit, but there are serious objections to be raised against the vast majority of them, owing to the arterial and cardiac depressions following their use.

With these highly important objections in mind, during the latter part of 1900, I commenced to use the Cealgic Tablets manufactured by Porter-Ryerson-Hoobler Co., Omaha, and I am glad to say that I have been eminently successful and can offer this combination to the profession with full confidence in its merits, knowing full well that a thorough trial, whenever opiates are indicated, whenever there is an increase in temperature or whenever there is pain, will be productive of the most gratifying results. The indications for the use of this combination are very numerous, but this arises from the fact that it strikes directly and effectively, without bad results, at the two most characteristic symptoms in disease, that is fever and pain, and with these two important points well under control the physician's battle in acute attacks is nearly won. In a great many cases I use Cealgic instead of morphine, which acts without stupefying my patient or impairing the sensibility, and no habit intervenes by its prolonged administration to lessen the satisfaction derived from its curative powers.

It stands at the head as a safe and effective anti-pyretic, and produces no depression, cardiac or arterial cyanosis, or any bad after-effects. The formula is on every bottle. I take pleasure in so recommending it to the medical profession.

J. J. Brady, M. D.
Frankfort, Kansas.

A Curious Present.

King's Medical Prescriptions is one of the most curious and interesting books that can be found in any physician's library. It is a selection of the famous prescriptions

of prominent doctors from Sydenham down to the present day. Good for reference and also makes an attractive and profitable present to physicians to whom you would like to tender a remembrance. Large type, 350 pages. Cloth, $1.00. Paper covers, 50 cents. Postpaid.

PRACTICAL SCIENCE CO.,
14 Dutch Street, New York.

How Tr. Digitalis Varies.

C. W. Edmunds, M. D., Ann Arbor, Mich., (Journal A. M. A., May 25, 1907) gives the results of his examinations of a number of samples of tincture of digitalis. The samples in question were secured in different parts of the country. Fourteen different tinctures of digitalis, obtained from wholesale manufacturers and from pharmacists, were tested and found to vary decidedly. Some of the tinctures were nearly four times the strength of others, even when obtained from the same source. Thus the actual strength of a dose that a patient receives is largely a matter of luck.

It is for this reason that many physicians have turned from the older preparations of digitalis and now use Digalen—Digitoxin Soluble Cloetta. For accuracy in dosage is one of the distinguishing features of Digalen. The average single dose is 16 min. and this quantity uniformly contains 1-222 grn. of amorphous digitoxin. In addition to accuracy of dosage when Digalen is employed, the physician may always expect prompt physiologic effects. On the other hand the action of the usual galenicals of digitalis is notoriously slow. To carry the comparison still further, Digalen is reported to provoke no gastric disturbances nor to produce no cumulative effects. Interesting literature concerning Digalen may be secured from The Hoffmann-La Roche Chemical Works, 90 John St., New York.

Excerpt

From address by Dr. Solomon Solis-Cohen, Philadelphia, Chairman of the Delegation from the Section on Pharmacology and Therapeutics of The American Medical Association to the meeting of The American Pharmaceutical Association.

"For the last few years pharmacists and physicians working hand in hand, have set themselves to change some of their mutual errors and mistakes of the past. It lies not in the mouth of the physician to reproach the pharmacist nor in the mouth of the pharmacist to reproach the physician. We have erred mutually, we have erred together, and we are determined to redeem ourselves together. The mere trade in patent medicines, in frauds and fakes, the deceits of all kinds, need not concern us. There are crimes outside of the ranks of medicine and outside of the ranks of pharmacy and we are not starting off on a general reform expedition. There are other organizations and other agencies for that purpose, but the movement to make the drugs—whether the product of the manufacturing houses or the product of the individual pharmacist—which are dispensed over the counter, upon our prescriptions, what they purport to be is one in which you and we have a common interest, and in which our patients have the greatest interest of all. I recognize and you recognize—we must recognize—that in the general progress of science and the general advance of discovery, and the general progress of the arts of manufacturing and preparation of crude pharmaceutics there is abundant room for large manufacturing houses which devote themselves to specialties of various kinds.

MANUFACTURING PHARMACY

For example, how can the individual pharmacist undertake to prepare and supply the great group of animal extracts and serums, which now have such a large part in the therapeutics of today? And so even with various galenicals, alkaloids and the like. There are many things which the retail pharmacist cannot do as well as that establishment which possesses the proper facilities and which is thoroughly organized to do well on a large scale what can only be done imperfectly on a small scale. We all recognize that, and the American Medical Association has taken steps, individual physicians have taken steps, to place themselves in proper relation with the great manufacturing houses, which are a credit to American pharmacy and to American business. We want to have the most cordial relations with them, so that these firms may be encouraged to prepare and offer to us for the benefit of our patients the best and purest and most definite pharmaceutical products. And yet, after all, there is a place, and there must be a place always for the individual pharmacist—the retail druggist, call him by whatever name you please; for the individual who practices as a scientific man the profession of pharmacy."

Committees have been appointed in the following States for the purpose of participating in the International Congress on Tuberculosis which is to be held in Washington in September and October of next year: California, Utah, Montana, North Dakota, Minnesota, Wisconsin, Illinois, Iowa, Indiana, Michigan, Ohio, Missouri, Kentucky, Kansas, Tennessee, South Caro-

lina, North Carolina, Maryland, New York, Massachusetts, Vermont, Maine, and West Virginia. A national committee for Holland has also been appointed.

The Tri-State Medical Association of Mississippi, Arkansas and Tennessee held its annual meeting in Memphis, Tenn., Nov. 19 to 21. Dr. F. J. Runyan, of Clarksville, Tenn., presided. The attendance was unusually large. A most interesting and important feature of the programme was an open discussion of quarantine diseases.

The Chemical Composition of Young Girls.

A local paper credits a German scientist with the statement that young girls are three-fourths sugar, and desires information as to what becomes of it after marriage. We seriously doubt the correctness of the analysis, but strongly suspect that we can guess the answer. It is converted into sugar of milk; if she remains unmarried it undergoes acetic acid fermentation.—Lancet-Clinic.

An English professor wrote on the blackboard in his laboratory:

"Professor Wilson informs his students that he has this day been appointed honorary physician to her Majesty, Queen Victoria."

In the course of the morning he had occasion to leave the room, and found on his return that some student-wag had added to the announcement the words:

"God save the Queen."

The Small Medical Colleges.

A notable introductory address, entitled Educational Democracy, was delivered at the opening of the seventy-seventh session of the Albany Medical College by Dr. Willis G. Tucker, professor of chemistry and toxicology in the college. It is published in the November number of the Albany Medical Annals. "Our smaller colleges," says Professor Tucker, "deserve and should receive fuller recognition and better support." We agree entirely with the speaker. We have never been able to discover that any physician was at all more excellent by reason of his having been graduated by a great university, and we are heartily tired of having it dinned into our ears that such and such a man must be superior on account of the greater number of years spent by him in undergraduate study. We always feel like retorting that it takes longer to gild a dolt than to educate a bright man.

We have heard too much of late years about the necessity of lengthening the medical course and raising the preliminary requirements. As regards the preliminaries, there are, says Professor Tucker, those who would "reduce everything to a strict numerical expression. They pursue their investigations with a foot rule and hourglass." They measure the floor spaces of the recitation rooms and laboratories in which the candidate has been instructed, and appraise the cash value of the apparatus employed. As well estimate a man by his vocabulary, as the faddists generally do! Our forefathers had no enforced preliminaries, yet there was far less illiteracy in the medical profession fifty years ago than there is today. In spite of the present requirements, Professor Tucker says: "Men who spell wretchedly and make bad work with simple arithmetical calculations still enter, armed with State credentials, and last year in this school more first year men were conditioned than in any previous year within my recollection." He adds that he is not inclined to believe that the average reputable American physician today is in any recognizable degree superior to his predecessor of a quarter of a century ago *as a result* of State supervision.

Where were our great men of the past in medicine graduated? Who cares to know what the institutions are or were (for some of them are defunct) upon which credit has been shed by such men as Rush, Bard, the Warrens, the Nathan Smiths, Bartlett, Jackson, Drake, McDowell, Hodgen, Pancoast, Gross, Sims, Eve, March, Bontecou, Mott, Parker, Clark, Bigelow, Hodge, Meigs, Thomas, Van Buren, Flint, and Barker? We have had enough of snobbery hinging on the source of the degree or on the State requirements.—N. Y. Medical Journal.

Patches of Desquamation on the Tongue.

The condition known as lichenoid state of the tongue, lingual intertrigo, marginal enfoliative glossitis, epithelial desquamation of the tongue, geographical tongue, tiger tongue, aberrant desquamation in spots, etc., has been recently studied by Bonnet of Antiquaille. In his opinion there have been grouped under a common designation a number of cases differing in their nature, ætiology, and their evolution, and really having nothing in common except a certain superficial resemblance in the lesions which they produce. Careful examination, however, will enable us to recognize considerable difference clinically between them. The author discriminates between the following: (1) In young infants the lesion is usually a temporary affair due to transitory malady; in other cases, on the contrary, the disorder is due to a morbid state which may persist almost indefinitely. (2)

The causes are incompletely known and are variable. It has been alleged by Weill that it is due to infection, and probably streptococcic, as it accompanies an epidemic of *perleche* (cracking of the corners of the mouth accompanied by infection). In a certain number of cases the disease begins in childhood and lasts indefinitely, coexisting with a tongue lesion (scrotal tongue), and is possibly due to heredity. In this case it may be due to a congenital deformity of the lingual epithelium. Disease has been assigned as a cause, and arthritism (lithæmia) is a common factor. Some cases, possibly, have ætiological relations with eczema, but this would be only exceptionally true. In many no cause can be assigned.—Le Bulletin medical.

Basis of Therapy in Diabetes.

Hall says every diabetic patient shows a different degree of inability to utilize carbohydrates. Cases are divisible into: (1) Those in which the combustion of sugar and conversion into fat are defective; (2) those in which the combustion of sugar is defective, but its synethesis into fat is normal; (3) those in which the combustion of sugar is defective and the synthesis of fat begins to fall. The extent of undernutrition in diabetes may be gauged by the ketonuria or output of ketone.

The following conclusions are taken from von Noorden: Some diabetics tolerate 70 to 100 grammes of carbohydrates daily, but excrete much acetone. Many develop ketonuria by changing to a diet free from carbohydrates, and this continues when carbohydrate is again given, the prognosis being bad. Others, with strict diet, lose the ketonuria, at least for a time. Removal of carbohydrates improves the general condition and also the cause of the ketonuria. The ketonuria shows wide variations at different periods, even when diet and carbohydrate tolerance are constant, which cannot be explained. Different patients, with similar tolerance factors and the same diet, show different degrees of ketonuria.—Practitioner.

Acute Lupus Erythematosus.

A case is reported by Dawson (Lancet) whose patient was a married woman of forty-three years. Without antecedent history. In June, 1905, a patch appeared in front of the left ear, quickly followed by a patch on the corresponding area on the other side of the head. Six months later the entire face was involved, except the upper part of the forehead and the skin around the mouth and orbits. The eruption was covered by adherent white scales and on the dorsal surfaces of the proximal phalanges were red patches showing dilated follicles filled by horny plugs. Microscopic examination showed a typical lupus erythematosus. In six weeks the left malar region became red and ran with a slight discharge resembling an eczema rubrum. A few days later a symmetrical rash appeared on the backs of the hands, of dull flat red and discrete papules. She was admitted to hospital, but became worse. The temperature rose at night, the scaly areas became raw and bleeding, the areas involved increased in extent and new areas were involved, cough developed, the breathing was accelerated, and albumin appeared in the urine. She died in coma after a stay of one month in hospital. Autopsy showed a semi-solid condition of both pulmonary bases, no tuberculosis, and greatly enlarged kidneys. Other organs were normal. The author notes that cases of this nature have seldom been observed from beginning to end. Erysipelas has been assigned as a cause of this acute phase of the disease, but the remarkable symmetry, the discrete character of the eruption, there being skin of normal color between the papules, the rapidity with which these and the bullæ developed, and the absence of pain or any feeling of even being ill until a few days before the patient's death, are symptoms which bear little resemblance to that affection. So many cases of this acute disease have supervened on the application of an irritant to the chronic conditiod as to make one hesitate before applying carbolic acid or other strong application where the disease is at all extensive. The general condition was one of acute infection in this case with the regular sequel of septic pneumonia. All the cases of which the author has record terminated in this way.

Plague in San Francisco.

The first case of bubonic plague reported in San Francisco was on May 27; on August 12 a second case was reported; August 13, 3 cases; on August 16, 1 case; on August 26, 1 case; August 27, 2 cases; August 31, 5 cases; September 2, 3 cases, and September 9, 3 cases. Up to September 10, 21 cases had been reported, with 9 deaths. Two of these originated at the City and County Hospital, one being Dr. Clifton Jones, an interne, and the other a hospital steward. The hospital is said to be in a filthy and disgraceful condition, there being many rats, fleas and vermin of various kinds. During last week 80 rats were caught there, six of which were infected with the plague. Dr. Jones is said to be improving, as his case was mild. The locations of origin of various cases are widely distributed, from North Beach to the Mission dis-

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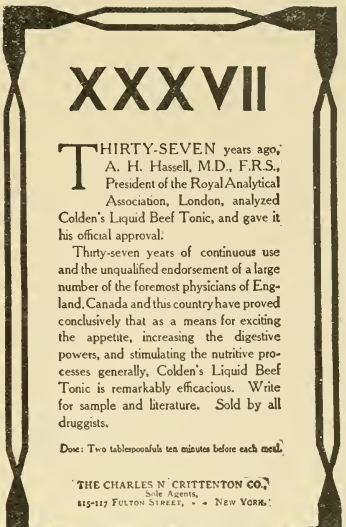
X-Ray in the Diagnosis of Gastric and Intestinal Disease.

Jollasse (Muench. med. Wochenschr.) says the size, shape and position of the stomach can best be determined by means of a radioscopic examination after the administration of a special meal containing bismuth subnitrate. The shape and position of the stomach are shown by means of the black shadow cast on the screen by the bismuth, while the disappearance from the gastric region of this shadow gives information concerning the gastric motility. Any shadow remaining after three hours should be considered abnormal. If the bismuth is administered in a capsule of gold-beaters' skin, the digestive power of the gastric juice may be measured. The bismuth shadow, which at first appears as a small black spot, will spread over the entire gastric area when the gold-beaters' skin has been digested. This takes place in two and a half hours if the gastric secretion is normal. One and a half hours indicate hyperacidity and five hours anacidity. In gastric ulcer the position of the lesion can sometimes be made out by the bismuth which adheres to the ulcerated area.

trict, Point Lobos camp, and two cases were found in Lombard Street, several blocks west of Van Ness Avenue, in the unburnt district. One death is reported from Berkeley and one from San Jose, and one developed on a steamer between San Francisco and Honolulu, evidently having originated at the former place. These three cases are not included in the account given. Of the 17 cases reported in San Francisco up to September 2, four patients were born in Italy, three in Ireland, two each in Spain and California, and one each in Finland, Russia, Germany, England, Holland and Greece. For the past three weeks large numbers of rats have been noticed in the city, and in the streets and stables from 10 to 30 dead rats a day have been found. Our San Francisco correspondent advises us that a strong committee from the San Francisco County Medical Society is looking after the matter of the plague and has waited on the mayor and asked him to dismiss the present board of health, which is said to be, at least, inefficient, and to appoint competent men on the board. The mayor has stated that if the matters which the committee believes should be attended to, and to which attention has been called, are not given prompt attention, he will summarily dismiss the board. At a recent meeting the county society instructed the committee to request the mayor, in the name of the society, to discharge the board of health, providing that body at the end of one week was not doing this duty. Latest advices are that the board of health has resigned and that Mayor Taylor has appointed a new board, consisting of Dr. Thomas W. Huntington, professor of surgery in the University of California; Dr. Dudley Tait, secretary of the State Board of Medical Examiners; Dr. William Ophuls, professor of pathology in Cooper Medical College, and Drs. Thos. G. McConkey and Guy E. Manning, who were members of the old board. The board is strong and well equipped and has the entire confidence of the medical profession and the community. The United States Public Health and Marine-Hospital Service has assumed charge of the measures to stamp out the plague, the request being made by the mayor of San Francisco, who added that the city would do all things possible to provide funds to carry on the work. Passed Assistant Surgeon Rupert Blue, U. S. P. H. and M.-H. Service, arrived and assumed charge on September 10. Four service officers, in addition to those already there, are en route to assist him. The city has been divided into 12 districts, each in charge of a competent inspector, who has had practical experience with bubonic plague. Under each district inspector are sanitary inspectors and rat catchers. This organization is in addition to the ordinary sanitary equipment of the city. Kitasato's plans, successfully used in Japan, have been adopted with modifications to meet local conditions, and the plague situation seems to be in a fair way to be abated. An attempt is to be made to disinfect the City and County Hospital, but, our correspondent thinks, it is not likely to be successful. As the disease appeared on the water front, arrangements were perfected and have been in force since September 2, to fumigate all vessels before loading and departure from San Fradcisco, for the destruction of rats. The City and County Hospital and other infected places have been fumigated.—Journal A. M. A.


XXXVII
THIRTY-SEVEN years ago, A. H. Hassell, M.D., F.R.S., President of the Royal Analytical Association, London, analyzed Colden's Liquid Beef Tonic, and gave it his official approval.
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The annual session of the Medical Department of the State University, Raleigh, opened September 9, with the largest class on record. The faculty hopes within the next year to occupy entirely new buildings which with the new hospitals now being built or planned in Raleigh will give renewed impetus to the school.

Induced Labor In Prolonged Pregnancy.

McKerron says that prolongation of pregnancy beyond the normal is not uncommon.

When pregnancy is unduly protracted effects are produced which have an unfavorable influence on the course of labor, which involves increased risk for both mother and child. He draws the following conclusions:

1. Pregnancy is unduly protracted in about 3 per cent. of cases.

2. The condition is associated with danger to child from (a) placental changes; (b) prolonffed or difficult delivery.

5. It is unfavorable for the mother from (a) excessive distension, which may lead to subsequent atony of abdominal muscles and permanent enlargement of the abdomen; (b) difficult or obstructed labor; (c) uterine inertia, with consequent liability to postpartum hæmorrhage.

4. The dangers to mother and child can, and should, be avoided by the induction of labor.

5. This should not be done as a matter of routine, but only when there is satisfactory evidence that pregnancy is prolonged and that its further continuance may lead to serious difficulties.—Jour. of Obstet. and Gynæcology.

Doctors and Lawyers.

"We are professional men in every sense of the word; we have the mental labor of lawyers, the moral standing of ministers, the technical knowledge of organized artisans, and the business qualifications of school children. The average man will give a lawyer $300 to $500, together with a lifetime's praise, to keep him out of the penitentiary for from two to ten years, and at the same time he will raise a phosphorescent glow and a kick that can be heard around the world if a doctor charges him $50 to $100 to keep him out of hell for a lifetime."—Texas State Journal.

The Milliner's Feather Duster.

It dusts the air. The woman who wears it bears about with her a drag net operating at a height of a little more than five feet above the pavement, a very promising altitude at which to gather in microbes. The feathers are so many tentacles for use in the chase. When she gesticulates with her head she distributes her "catch" upon the just and the unjust impartially, in church, in the theatre, and elsewhere. On her return to her home she is very apt to wave the plumage over her sleeping child, only to wonder, a few days later, from whom little Johnnie got the scarlet fever.—N. Y. Medical Journal.

Climatic Effects.

The winter weather is at hand and it is well known to what extent the cold will aggravate many female troubles. Physicians have used many preparations without having found one of them which gave satisfaction. Physicians trying Tyree's Antiseptic Powder will be satisfied that they have at last secured just the preparation they desired. Tyree's Antiseptic Powder can be used freely in any strength, at any time, and in any case. It is superior and preferable to the mercuric bichloride solution, because it is devoid of any element of danger. Its solubility is greater than that of bichloride of mercury tablets, and it does not erode delicate mucous membrane. The observant doctor will find that it makes a solution that may be thoroughly depended upon as a responsible and reliable antiseptic healing agent. It is scrupulously made, and its well balanced chemical adjustment has established its medical popularity. A trial package will be mailed free of charge to physicians if they will send their name and address to Mr. J. S. Tyree, Chemist, Washington, D. C.

The Value of Codeine.

The Cleveland Medical Journal quoting from the Denver Medical Times, concerning codeine, states, that' according to Butler, "it is less depressing and more stimulating than morphine, does not constipate, cause headache or nausea, and rarely leads to the formation of a habit. Codeine seems to exert a special, selective, sedative power over the pneumogastric nerve, hence its value in irritative laryngeal, pharyngeal and phthisical coughs with scanty secretion. Like morphine, it has proved of value in checking the progress of saccharine diabetes, and it has been used for long periods, without the formation of the drug habit, inasmuch as when glycosuria was brought to a termination by dietary and other measures, the cessation of the use of codeine was not followed by any special distress. The effects of the use of codeine on the alimentary canal are remarkable, in that it asscages pain as well or better than morphine and nevertheless does not check the secretions or peristalsis notably, unless the latter is excessive, as in dysentery." In view of these facts it would seem that Antikamnia & Codeine Tablets are a remedy which should find a wide field. Prof. Schwarze (Therapeutische Monatshefte) in writing upon the treatment of the different forms of dysmenorrhoea, and the different forms of congenital deformity of the uterus, states that the coal-tar analgesics are of much use, as well as the preparations of iron and sodium salicylate. In many cases it is necessary to administer codeine in small doses, and the tablets of "Antikam-

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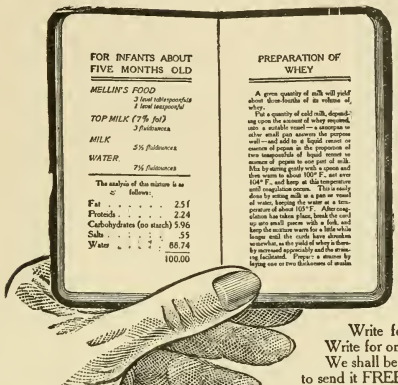
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2 level tablespoonfuls
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TOP MILK (7% fat)
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MILK
3½ Fluidounces
WATER
7½ Fluidounces
The analysis of the mixture is as follows:
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Protein 2.24
Carbohydrates (no starch) 5.96
Salts 55
Water 88.74
100.00
PREPARATION OF WHEY
A given quantity of milk will yield about three-fourths of its volume of whey.
For a quantity of cold milk, depending upon the amount of whey required, into a suitable vessel — a saucepan or other small pan answers the purpose well — add to a liquid rennet or essence of pepsin in the proportion of two teaspoonfuls of liquid rennet to a quart of pepsin to one part of milk. Mix by stirring gently with a spoon and then warm to about 100° F., not over 104° F., and keep at this temperature until coagulation occurs. This is easily done by setting milk in a pan or vessel of water, keeping the water at a temperature of about 103° F., after coagulation has taken place, for a few minutes and then cutting the curd and keep the mixture warm for a little while longer, when the curds have shrunken somewhat, as the yield of whey is thereby increased appreciably and the straining facilitated. Prepare a strainer by laying one or two thicknesses of muslin

We have just issued a new Booklet for physicians' use entitled "Formulas for Infant Feeding."

In it are given a number of formulas for modifying milk to suit the varying requirements of infant feeding from birth to six months of age and older. The analysis for each formula is given; also short chapters on How to Prepare Top Milks of Different Fat Percentages from Whole Milks of Different Fat Percentages; How to Prepare Whey; etc., etc.

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nia & Codeine" would seem to have been especially prepared in their proportions, for just these indications.

Orchitis Followng Parotitis.—Rebandi (Gazz. degli ospedali) in the description of an epidemic of parotitis, calls attention to the orchitis, which is a frequent complication. Though the importance of this complication is often overlooked, and writers such as Velpeau speak of it as the least serious of all forms of orchitis, the author draws attention to the fact that it is so often this form of orchitis which leads to atrophy and sterility. Laveran describes an epidemic of parotitis in the Hospital Val de Grace in which there were 111 cases of orchitis, and among these were 37 cases in which atrophy followed. It is the experience that atrophy is preceded by several months by an abnormally soft consistence of the testicle. As atrophy takes place so comparatively late it often escapes the attention of the physician. If the atrophy only affects one testicle, as is so commonly the case, the effect upon sterility is scarcely probable, In all cases of orchitis complicating paortitis, atrophy with sterility are the important factors to be considered.

Movable Kidney.—Mackenzie's (Lancet) observations on movable kidney are based on some 3,900 examinations. He defines the condition as one where the examining hand can get completely above the upper end of the kidney. Where only the lower end of the organ can be felt, it is said to be "palpable." Of 2,801 women of all ages, the kidneys were palpable in 449 and movable in 515. Of 1,067 men of all ages, the kidneys were palpable in 25, and movable in 11. In no case were the kidneys movable under the age of twelve years. Of 99 female children under twelve years of age, the kidneys were palpable in ten. Over the age of twenty-two years there is a great increase in the proportion of cases. After the age of thirty-seven years the proportion declines again. Among males, no case of movable kidney was met with under the age of twenty years, and the highest proportion occurred between the ages of thirty and forty years. Among the causes of abnormal kidney mobility the influence of corsets, tight lacing, and dress has been considered as important. Laxity of the abdominal walls cannot play an important role, for its most important cause, repeated child bearing, has no influence. Probably absorption or atrophy of the perirenal fat is influential, and mobile kidney is certainly

met with more often in wasted individuals. But sex is the most important factor in causation, and it may be that the increase in volume of the kidney at the menstrual period plays a part. The right kidney is more often displaced than the left, because the liver tends to displace the right, the pancreas to support the left. The rarity of movable kidney in children is probably due to the fact that the tissue of the capsule of the kidney until the tenth year is simply areolar and does not become filled with fat until after that age. In 411 out of 515 cases there were no symptoms which could be attributed to the kidneys. In the remaining 104 cases, the symptom almost invariably present was pain, usually referred to the right lumbar region behind, but sometimes more to the middle or all round the back, sometimes to the right hip or thigh or down the leg, sometimes in front to the right iliac fossa, sometimes to the epigastrium, sometimes to the ovarian region or to the groin. The pain was usually of a dragging or dull aching or bearing down character, but sometimes stabbing or knife like. It is not constant as a rule, but comes and goes, and may be induced or aggravated by coughing. It is usually much relieved or disappears entirely on lying down. All kinds of nervous symptoms have been attributed to movable kidneys, even locomotor ataxia. Dislocation of the kidney may take place more or less suddenly, following lifting or straining, etc. Most cases having no symptoms, require no treatment. Attacks of pain of only occasional occurrence are best treated by rest in the position which the patient finds most comfortable—namely, on the back or on the side of the affected organ. The local application of heat by means of hot water bottles, or hot fomentations, and the use of preparations of belladonna are useful in relieving severe pain. When the pain is wearing and persistent, rest in bed for some time should be insisted on. In thin and neurasthenic subjects, the general condition and nutrition should be bettered. With prolonged rest, good feeding, and massage, the kidney may settle down into its proper condition and with an increase of the body fat be better supported when the patient gets around again. A pad and bandage often helps a great deal, but most of the kidney belts are cumbrous and unsatisfactory. The most efficient apparatus is of the nature of a spring truss, the kidney being kept in position by properly applied pressure of the spring.

Surgery of Tuberculous Cervical Glands.

D'Este(Il Morgagni) discusses the different ways of treating tuberculous cervical glands, especially excision and the injection of iodine. Since many cases recover completely with no other than dietetic and hygienic treatment, it seems unreasonable to advise free excision for cases with infection of only a few small glands. The advocates of iodine as the best treatment for all cases advise that intractable cases shall be finally submitted to more radical operations. He considers that both schools have exaggerated somewhat. He does not deny the existence of great benefit to be derived from the hypodermic or parenchymatous injection of iodine preparations, but he decides that when the glands are large or numerous or painful or matted together, and still more when they are caseous or suppurating, treatment should begin with excision of the affected glands, unless there is any formal contraindication of operation. Recognizing a special rather than specific action of iodine in increasing the general organic resistance to tuberculosis, he considers that the two forms of treatment should be used together in all suitable cases, and he records a number of cases chosen to test his opinion. He does not regard an apical catarrh as a reason for not operating, and quotes Blos's record of sixteen cases operated on while suffering from incipient phthisis, and afterwards found to have recovered completely. The contraindications which he does admit are miliary tuberculosis of the lung, multiple visceral and articular lesions, and an extremely bad general condition. In some cases operation was refused or complete extirpation was considered to be unsafe. An unsatisfactory scar is much more common after partial operations than after complete dissection of the infected glands. Relapse is due to incomplete removal of the diseased area, and is therefore to be attributed to the operator rather than to the operation.

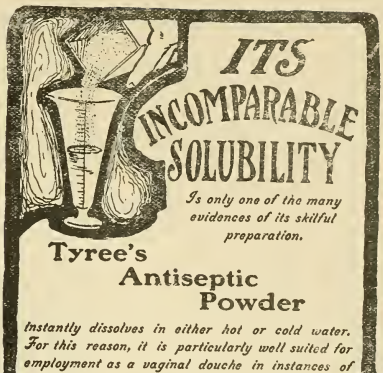
The author divides his own cases into three groups: (1) Eleven cases of radical treatment in its widest sense, all the glands which could be reached by minute and patient dissection being removed. (2) Twelve cases in which similar radical treatment was re-enforced by distant intramuscular iodine injections as described below; seven of these patients were in the same group as those in the first group and the remaining five were in a much worse state. (3) Seventeen cases for different reasons could only be treated by incision and scraping or shelling out the glands, in addition to iodine treatment. The first group of patients recovered with only one relapse, and that in a very severe case more than a year after the first operation. The second group recovered without any relapse during the two years that the patients have been under observation. In the third group there were

four cases of relapse, or rather of a continuation of the original disease, which could not be entirely removed by the defective method employed. The author attaches great importance to removing all the diseased skin, so that the scar is the line of union of two pieces of healthy skin. After the first incision he uses chiefly a pair of scissors with blunt ends. The different planes of tissue are finally sutured separately with fine catgut, so as to leave no empty spaces, and so that there may be no unnecessary tension of the skin. When in the course of operation the jugular vein is wounded he treats it by lateral suture or ligature, but he describes the operation of tieing the vein as free from danger. The iodine preparation contains pure iodine, 1 part; iodide potassium, 10 parts; anesthetic guaiacol, 5 or 10 parts; glycerine, 100 parts. Of this 1 cg. was injected at first, and the amount subsequently increased to 7 cg. or less, from ten to thirty-nine injections being made altogether. In some cases injections were made for some days before operation; in others they were begun directly after operation. Some account is given of each case belonging to the first two groups. The cases of the third group are not reported in detail. The less satisfactory results in the third group show that the success obtained with the second group was not simply the result of the iodine treatment. The writer considers that the method of injection of iodine into the gluteal or lumbar muscles is the best of all means of introducing iodine into the system, and may be safely employed at all ages.

For nervousness, sleeplessness and sexual excitement characterized by erections or even chordee, various authorities vary in their recommendations. Ringer recommends the use of aconite and camphor. Bartholow and Phillips both advise the administration of lupulin. The value of Hyoscyamus has been appreciated by many medical men for a long time, and is quite valuable. Bromidia is to be highly recommended, since it consists of chloral, bromide, hyoscyamus and cannabis indica, and acts as a somnifacient, spinal sedative and hypnotic. The dose is a drachm to two drachms an hour before bed time.—American Journal Dermatology.

Dr. Zeb M. Caveness, of Wakefield, was stabbed by a drunken man July 10, but was only slightly wounded.

Dr. Thomas R. Little, of Greensboro, was successfully operated on for appendicitis a few days ago.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Owing to Dr. Stuart McGuire's absence from Richmond on his summer vacation St Luke's Hospital will be closed from Aug. 1st to Sept. 15th.

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Miscellaneous.

Gastro-Intestinal Ailments of Young Children.

As the hot weather approaches the usual number of cases of gastro-intestinal ailments will confront us and if we be not alert the same mortality of old will occur among our little patients of one and two years. The keynote to success in the management of these cases is to see that correct feeding is enforced and to keep the alimentary canal as clean and nearly aseptic as is possible. If this be done much suffering can be obviated and many little lives saved.

Every medical man these days is capable of giving correct advice on infant feeding, the care of bottles, accessories, etc., if he will only take the time and trouble to make the mother understand how important it all is. The doctor's suggestions on this matter are too often regarded as simply platitudes and not thought of seriously until the child is in the throes of a severe illness. The following clinical reports are illustrations of my usual method of handling the more common but serious gastro-intestinal diseases we meet during the heated season.

Ethel G., aged ten months, suffering from cholera infantum; bottle fed. Was passing watery stools every few minutes. Temperature had been considerably elevated, but was now slightly abnormal. Mouth and tongue pearched. Considerable emaciation and scaphoid abdomen. Circulation weak and respirations labored. In fact an extreme prostrate condition.

Treatment: I put four ounces of Glyco-Thymoline with eight ounces of water and gave it as a high enema, causing it to be retained as long as possible. This was repeated every hour or so until the bowels were thoroughly cleansed and the stools diminishing in number. Gave one-tenth grain of calomel every two hours until the discharges showed the characteristic greenish color. Also gave the following:

℞	Elixir Lactopeptine	3ij
	Glyco-Thymoline	3ij
	Oil Peppermint	gtt. j

M. Sig: 20 drops every hour. After eight hours the child was able to take nourishment and retain it. This consisted of cold pasteurized milk with an equal portion of lime water. Child was given all the cold water and lemonade she wanted. She made a good recovery.

Jennie M., aged fourteen months, suffered from gastroenteritis with much fermentation. Bowels swollen and tympanitic. Fever of a remittent type due to autotoxemia. Child delicate and poorly nourished; still nursing the mother's breast. Mother herself in poor health and in no condition to nourish her child.

Treatment: Put the little one on cow's milk diluted with lime water. Three times a week I gave a high enema of a warm saline solution and Glyco-Thymoline, equal parts. Also gave the above prescription, a teaspoonful every four hours. Child steadily improved under this treatment and in six weeks was in a good state of nutrition and health.

A point that I wish to emphasize in these notes is that Glyco-Thymoline is a most excellent antacid and antiseptic and deserves special consideration in the stomach and bowel disorders of young children. It gives promdt and gratifying results.—H. B. Brown, M. D., Waukegan, Ill.

The Hygeia Hospital, Richmond, Va., to be Enlarged.

The Hygeia, Dr. J. Allison Hodges' private Hospital and Sanatorium, will be closed during the month of August for the purpose of adding another story to the building.

The Bath Department will also be remodelled and enlarged.

This is the fourth time that the buildings have been enlarged, and it is believed that with the completion of the present improvements and contemplated equipment the institution will be sufficiently large to meet all future contingencies.

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Dr. Arthur Hitchens, Director of the Antitoxin and Vaccine Laboratories of the H. K. Mulford Company, is in London engaged with Prof. E. A. Wright in the study of opsonins and vaccine therapy.

Buffalo Lithia Waters have been made the subject of exhaustive clinical study and observation, and they owe their reputation to the positive results obtained in certain maladies, for it has never been claimed that they are a specific for every disease. The accompanying testimonial shows that they are used generally with highly, and, not infrequently with the most remarkable results in uric acid diathesis, or lithaemic conditions, gout, rheumatism, renal calculi, stone in the bladder, inflammation of the bladder, albuminuria, Bright's Disease and diabetes, as well as in gastro-intestinal disorders, gall stones, neurasthenia, dyspepsia, diseases of women, puerperal eclampsia, nausea and vomiting of pregnancy, malaria and its sequelæ, scarlatina, infectious diseases, dipsomania, impotency and sterility, diseases of the nervous system, diseases of the skin, and before and after surgical operations.

Dr. I. Halsted Boyland, Paris, says "that in cases where lithia, soda and potash are indicated, he has obtained far better results from the Buffalo Lithia Waters than from any of the tablets or other preparations of the lithium salts."

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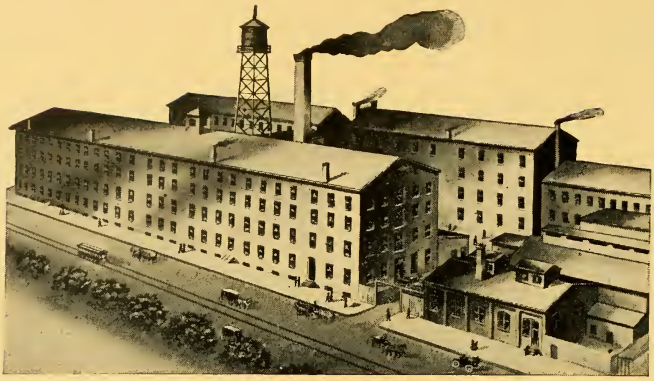
Many specifics have been advocated as a sure cure; very few, however, have been found satisfactory. An exception may be claimed in favor of Tyree's Antiseptic Powder, says Dr. M. E. Chartier, Faculte de Paris, France, as it possesses curative as well as preventive properties. Besides, it is quite inexpensive, five or six tablespoonfuls of the powder in a gallon of water are quite sufficient for an ordinary sponge bath, which will act as a preventive. A larger percentage may be necessary to cure the most troublesome case. There are to be found in the drug stores many preparations containing boracic acid and talcum compounds. These preparations, generally used in a dried state, have the great inconvenience of clogging the pores of the skin. This is not the case with Tyree's Antiseptic Powder, as it acts as a deodorizing, stimulating agent. Sample and particulars from J. S. Tyree, Chemist, Washington, D. C.



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Here will be stored the crude drugs, the grinding and milling departments, and the manufacturing of fluid, solid and powdered extracts, tinctures, synthetic products, etc.

These additional buildings will enable the firm to greatly increase their manufacturing facilities in the Thirteenth Street laboratories, provide additional shipping facilities and increase the scope of their research and standardization laboratories.

The biological laboratories at Glenolden are used for the preparation of antitoxins, curative sera and vaccines. The physiological laboratory for testing drugs on animals is also located at Glenolden.

The recent National and State legislation requires the observance of the standards of the U. S. Pharmacopoeia and National Formulary. As the expense of standardization work on a small scale is almost prohibitive, druggists generally are dependent upon the large manufacturing houses provided with scientific departments and facilities for assaying and testing drugs.

Realizing the importance of adopting standards for the character, quality, and strength of medicinal drugs, chemicals, and preparations of the same, the H. K. Mulford Company provided facilities for standardization work early in its history. Their foresight is now being amply rewarded by the increased demand for their products.

As the demand for the Mulford products is entirely due to the requirements of the medical and pharmaceutical professions, the fact that they are obliged to greatly increase their facilities at this time is the best evidence of the confidence reposed in the house.

Stimulating the Liver.

In an editorial note on this subject in the Western Medical Review for March, 1907, the writer says: "It had been demonstrated experimentally that the only agents which actually increase the secretion of bile are the bile acids and, to a less extent, salicylic acid. The increase in the flow of bile after administering bile salts by mouth is so much greater than the amount absorbed that a specific stimulant action on the secretory cells of the liver must be granted."

The presence of the natural sodium salt of the physiologic bile acid (glycocholic acid) in chologestin, combined with the true salicylate of sodium, from oil of wintergreen, (which is decidedly less irritant to the stomach than the synthetic salt), accounts for its distinct and positive value as a true cholagogue. In addition to their "liver stimulating" action, these agents contribute to chologestin its efficiency as an intestinal antiseptic, thus rendering it of marked clinical value in the treatment of undue intestinal fermentation and putrefaction, chronic intestinal auto-toxemia, etc. The physiologically standardized pancreation (with sodium bicarbonate to guard it through the acid stomach) assists in the natural conversion of carbohydrates and emulsification of fats and thus renders chologestin especially valuable in all forms of intestinal dyspepsia, especially if attended with biliary stasis, catarrhal conditions of the biliary viae, etc.

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It Differs in its Effects from all Analogous Preparations; and it possesses the important properties of being pleasant to the taste, easily borne by the stomach, and harmless under prolonged use.

It has Gained a Wide Reputation, particularly in the treatment of Chronic Bronchitis, and other affections of the respiratory organs. It has also been employed with much success in various nervous and debilitating diseases.

Its Curative Power is largely attributable to its stimulant, tonic, and nutritive properties, by means of which the energy of the system is recruited.

Its Action is Prompt; it stimulates the appetite and the digestion, it promotes assimilation, and it enters directly into the circulation with the food products.

The prescribed dose produces a feeling of buoyancy, and removes depression and melancholy; hence the preparation is of great value in the treatment of mental and nervous affections. From the fact, also, that it exerts a tonic influence, and induces a healthy flow of the secretions, its use is indicated in a wide range of diseases.

NOTICE--CAUTION.

The success of Fellows' Syrup of Hypophosphites has tempted certain persons to offer imitations of it for sale. Mr. Fellows, who has examined samples of several of these, **finds that no two of them are identical**, and that all of them differ from the original in composition, in freedom from acid reaction, in susceptibility to the effects of oxygen when exposed to light or heat, **in the property of retaining the strychnine in solution,** and in the medicinal effects.

As these cheap and inefficient substitutes are frequently dispensed instead of th genuine preparation, physicians are earnestly requested, when prescribing the Syrup, to write "Syr. Hyphophos. **Fellows."**

As a further precaution, it is advisable that the Syrup should be ordered in the original bottles; the distinguishing marks which the bottles (and the wrappers surrounde ing them) bear, can then be examined, and the genuineness—or otherwise—of the contents thereby proved.

This preparation can be procured at all chemists and druggists, everywhere.

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For the treatment of Alcoholism and Drug addictions. Morphine, Cocaine, etc.

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though imitated and substituted in every conceivable form, stands out to-day all the more efficient by such comparison. That the very cheapness of substitutes is evidence enough of their sophisticated character is amply demonstrated by the following editorial abstract from the *Bulletin of Pharmacy:*

"It is reported that the majority of several hundred samples collected of distilled extracts of witch hazel sold in Chicago drug stores has been found to contain *Wood Alcohol* instead of grain alcohol, and even *Formaldehyde*.... The spirit of intolerance against the sale of preparations containing wood alcohol, *whether for internal or external use,* is constantly growing."

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CHATTANOOGA, TENN.

After March 1, 1908, it will be unlawful against the opium vice, which is so com-
to import opium into the Philippines in mon among the Chinese, and is designed
whatever form, except by the Government. primarily with a view of preventing the
This law is the outcome of the agitation Filipinos from becoming its victims.

American Proctologic Society.

Ninth Annual Meeting, held at Atlantic City, N. J., June 3 and 4, 1907. The President, Dr. Samuel G. Gant, in the chair.

OFFICERS ELECTED.

The following officers were elected: President, A. Bennett Cooke, M. D., Nashville, Tenn.; Vice-President, Louis J. Krouse, M. D., Cincinnati, Ohio; Secretary-Treasurer, Lewis H. Adler, Jr., M. D., Philadelphia, Pa., and the Executive Council, J. Rawson Pennington, M. D., Chicago, Ill.; Chairman, Samuel G. Gant, M. D., New York City, N. Y.; A. Bennett Cooke, M. D., Nashville, Tenn.; Lewis H. Adler, Jr., M. D., Philadelphia, Pa.

The place of meeting for 1908 is Chicago, Ill., the time to be announced later.

ELECTION OF MEMBERS.

The following were elected members of the Society: Dr. Jerome M. Lynch, of New York City; Dr. Jas. A. McVeigh and Dr. J. A. MacMillan, of Detroit, Mich.

The following is an abstract of the principal papers read:

PRESIDENT'S ADDRESS.

The President, Dr. Samuel G. Gant, of New York City, said "that the annual meetings of the Society were like a Post-Graduate School where advanced information in proctology could be obtained by the members. He considered it unwise to admit to membership in the society the general surgeon and young rectal specialists of less than five years experience in this special work, because the membership would become too large and the papers contributed by them would not meet the requirements.

He maintained that the proctologist of the future, in order to be successful, must have a thorough literary and medical education, a hospital training and clinical facilities, and that he must be clever, industrious and persistent. He emphasized the necessity of educating both the profession and the laity, as to the remarkably improved methods now employed in the handling of patients suffering from disease in the lower bowels. He also said it was the duty of the proctologist to demonstrate by his work and writing that most tubercular fistulæ were curable and that the curing of ordinary fistulæ did not tend to bring about lung or skin affections as was formerly believed; that fecal incontinence does not follow fistulæ operations, when the muscle is cut at a right angle and the wound is properly dressed; that many rectal diseases, such as fissures, ulcers, small fistulæ and some hemorrhoids can be operated upon under local anaesthesia; and that in the majority of instances, constipation and chronic diarrhoea are curable by local and surgical measures.

Finally, he emphasized the fact that the etiology of many discomforts, nervous and reflex phenomena, usually attributed to the genital organs is frequently to be found in some pathologic process located in the sigmoid, rectum or anus."

REPORT ON PROCTOLOGIC LITERATURE FROM JUNE, 1906, TO JUNE, 1907.

Dr. Samuel T. Earle, Baltimore, Md., read his report on Proctologic Literature, covering a period from June, 1906, to June, 1907, in which he said "that while there has been nothing startling in Proctologic literature in the past twelve months, your committee is gratified with the steady progress in this branch of medicine and surgery, as has been reflected in the literature on this subject. Especially gratifying have been the recommendations for the radical treatment of carcinoma of the upper rectum and sigmoid, as set forth in the papers of Samuel G. Gant, W. J. and C. H. Mayo, and James P. Tuttle, in which they all recount the combined advantages of the abdominal and perineal routes, which we think will greatly lessen the likelihood of recurrences, and increase the number of permanent cures. We note with pleasure the systematic efforts that are being made in the study of the etiology of pruritus ani. The paper of Wallace, of London, in 1905, on the study of this question stimulated the efforts of others in this direction, and we find an excellent paper by J. C. Hill, of Boston, on the same, in the Boston Medical and Surgical Journal, 1906. In this article he takes the stand with Wallace that there is always a cause for this malady in which the pruritus is only a local symptom. We quote him as follows: "Pruritus ani is the symptom caused by unnatural moisture or discharges, produced either by lesions about the anus or by congestion, or some pathologic condition in the rectum or sigmoid. It is due to one of five causes. First, and by far the most important are superficial ulcerations, or abrasions of the anal canal. Second, catarrhal diseases. Third, external hemorrhoids. Fourth, inflammation or irritation of the crypts of Morgagni. The free borders or valves of these crypts consist chiefly of nerve fibres, ganglion cells and connective tissue. When inflamed or infected, they may give rise reflexly to pruritus ani. The writer calls attention to the tits which project from the margin of these valves as accessory organs. When hypertrophied or elongated they cause many distressing symptoms about the anus, viz: creeping, crawling sensations and itching. Fifth, small polypi of the anal canal."

It is not only necessary to remove the exciting cause of the disease, but also to di-

rect appropriate treatment to the unnatural conditions of the skin. In this connection your committee is glad to be able to report a number of cases of the aggravated form of this disease, which had failed to respond to the usual local and constitutional methods, that were successfully treated by Dr. Ball's recommendation of dividing the anal nerves. These have been reported by Drs. Mattin and Earle.

Dr. Charles B. Kelsey calls attention to the office treatment of hemorrhoids by puncture with the electric cautery. The method is to make numerous punctures with a pointed cautery to the internal hemorrhoids. This method has been used for the past ten years in lieu of that by injection, with most satisfactory results, and without any unfavorable effect. For the details of the method, I would refer to his article in the Therapeutic Gazette for March 15, 1906. The reviewer would respectfully report with reference to this suggestion, that about ten years ago he tried in a number of cases, but with only temporary success where the hemorrhoids were large. It answered very well in small capillary hemorrhoids. J. A. Hartwell in the Annals of Surgery, Philadelphia, for 1906, Vol. 43, page 146, reports a case of resection of the rectum for syphilitic stricture, with end to end anastomosis. As might have been predicted, it recurred, and while it was necessary to continue dilating, he was not hopeful of results. Your committee would remind its members that such radical measures seldom accomplish the desired results, as recurrence is almost inevitable.

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Brooklyn - New York.

"ADDITIONAL EXPERIENCE WITH A NEW PROCEDURE IN OPERATING FOR ANO-RECTAL FISTULA."

By Dr. J. R. Pennington, Chicago, Ill., who said: "I have found the employment of the set on in operating on cases of ano-rectal fistula greatly aids in preserving the contour of the anus and the sphincter muscles.

The technique in using the seton is as follows: After all the fistulous tracts external to the sphincter are divided a probe-pointed director is passed into the bowel through the remaining tract and an incision made on its distal side. This incision should extend far enough distally to divide all or a part of the fibers of the external sphincter and in such a direction as to locate the transferred internal opening at or near the anal margin. Then, turning the knife, make an incision—Salmon's "back cut"—on the proximal side of the tract. A seton is then passed through the opening entering the bowel and tied loosely around the tissues remaining and undivided.

The wound is dressed as after the ordinary incision operation for fistula. At the end of twenty-four to thirty-six hours the wound is re-dressed, care being taken to dress it so that the opening entering the bowel will be made to heal from the proximal toward the distal side. The object in doing this is to advance the final fistulous tract as far distally (toward the skin) as the case will permit, so that, if possible, it will pass through or distally to the fibers of the external sphincter, when the healing process is complete.

As a rule the enlarged tract entering the bowel soon closes, with the exception of the part through which the seton passes. As soon as this has occurred the seton may be removed, and by the time the external wound is healed the tract entering the bowel will possibly have closed also. Should it not, at any time later this little tract may be dissected out and the remaining fibers of the muscle sewed together, thus preserving the contour of the anus and the functions of sphincters.

"OCCULT HEMORRHAGE FROM THE RECTUM."

By Dr. William M. Beach, Pittsburg, Pa., who stated:

1. Occult blood in the stool indicates disease high up in the gastro-intestinal tract.

2. Accompanied by certain rational symptoms as pain localized, the origin of occult blood can be noted.

3. The discovery of blood in the stool may enable us to predict hemorrhage or prevent disaster.

4. The most frequent sources of occult blood are in the order named: Stomach, duodenum and Caput Coli.

5. The Aloin-turpentine test as practiced by Dr. J. Dutton Steele, of Philadelphia, is recommended.

6. Proctologists should make an examination for occult blood a routine practice in cases of anæmia accompanied by diarrhœa or constipation.

"ETIOLOGY AND SYMPTOMS OF FISSURE."

By Dr. C. F. Martin, of Philadelphia, Pa., who said: "The fissure is usually situated posteriorly and directly over the "white line" of Hilton, due to the arrangement of the fibers of the external sphincter and to the fact that the anal canal has less elasticity directly over that line. Most fissures start as the result of the distention of the canal by hard feces and excessive straining at stool. Those situated anteriorly are often seen after confinement due to the pressure of the fetal head upon the perineum.

The sentinel pile is noted in most cases if the fissure has been present for any length of time. It is a simple inflammatory hypertrophy. Hypertrophy of the anal papillæ does not appear to be an important factor in the causation of fissure. True hypertrophy of the sphincters is rarely seen, but in its place we find an excessive irritability of the external sphincter.

The distinctive symptom of this disease is pain or sphincteralgia, preceded by a "pain interval" of from one minute to an hour, during which time the patient has comparative comfort. The pain is caused by spasm of the sphincter compressing the nerves in the ulcer. This contraction interferes with the perianal circulation and renders the inflamed nerves more sensitive. The "pain interval" is caused by a temporary improvement in the perianal circulation produced by the straining efforts at stool.

The constipation of fissure often precedes the formation of the ulcer, an irritable sphincter being the underlying factor in the production of this condition. The constipation increases after the formation of the ulcer due to the fear of the patient of the pain following stool.

The treatment consists in the divulsion of the sphincters and the usual stimulating after treatment. The sentinel pile should be removed at the time of divulsion. Division of the external sphincter is not advised, for frequently it does not unite and eventually atrophies. Fistulæ, abscesses and fecal impaction are mentioned as frequent complications of fissure and call for appropriate treatment.

"LOCAL VS. GENERAL ANESTHESIA IN RECTAL SURGERY."

By Dr. G. B. Evans, Dayton, Ohio, who

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Destroys Pus and any Morbid Element with which it comes in contact, leaving the tissues beneath in a healthy condition.

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In order to prove the efficiency of HYDROZONE, I will send a **25c. bottle free** to any Physician upon receipt of 10c. to pay forwarding charges.

NOTE.—A copy of the 18th edition of my book of 340 pages, on the "Rational Treatment of Diseases Characterized by the Presence of Pathogenic Germs," containing reprints of 210 unsolicited clinical reports, by leading contributors to Medical Literature, will be sent free to Physicians mentioning this journal.

Prepared only by

Charles Marchand

Chemist and Graduate of the "Ecole Centrale des Arts et Manufactures de Paris" (France).

57-59 Prince Street, NEW YORK.

stated that "Pain naturally is the common curse and dread, though relatively essential of the human family.

The law of self-preservation when an individual is threatened with pain is at once a law of resistance, manifest by intense expectancy and defiant attitude.

The shock incident to the terror of pain is incomparable to that which is likely to follow an abbreviated use of a general anesthetic. In consideration of the evolutionary plane occupied by the average American of today and the more remote period of his removal from the gorilla peripheral sensibility of the jungle, we are forced to conclude that he is more sensitive, and in need of greater consideration for the relief of pain. Because an operation can be done painlessly, it does not follow that there will not be subsequent suffering and some, and perhaps, severe shock.

But in this nerve block period of Creile and Pennington, and the Gant period of dermal and sub-dermal distention we are told that there is scarcely any use any more for a general anesthetic. Do we not believe as Proctologists that in our operative field sensibility is most difficult to abolish, and would it not naturally appear that more narcosis is necessary in this kind of surgical work and as a consequence more shock? Again, would it not be possible by the combined use of general and local anesthesia less shock would ensue, and more operations could be made with success. I believe that by using the local anesthetic preceding the general anesthesia we lessen the amount of the general anesthetic appreciably, diminish the dread and fear, and consequently diminish shock and danger thereby. Therefore, the combined method of narcosis, less anesthetic, suspending shock incident to conscious dread, as well as anesthetic shock, rendering more complete operative area, consequently more satisfactory work. It is simple to operate upon prolapsing piles, but not so simple to operate upon piles above the sphincters yet demanding operative interference.

The injections of sterile solutions disturb the parts anatomically. The frequent punctures through the tissues invite infection, and infection trouble. You can never measure the nerve and seldom the surgical all of your patient. Its chief advantage is that occasionally you are able to do work in your office and even then unsatisfactorily.

I fail to see the advantage of operation under local anesthesia in your office and follow your patient home and give hypodermic of morphia, over the usual custom of operating at home in the first place.

An operation for hemorrhoids is a matter of some seriousness—often attended by some shock—often bloody, and the greatest caution should be observed that asepsis be obtained.

I do not think it best for our patients that general practitioners should be taught that aseptic precautions at the time of operation and rest at home for a few days, is unnecessary. Do we not magnify the applicability of local anesthesia, will not accidents occur, are we not sacrificing perfect scientific work, are we not belittling our chosen work—a class of operations that are important and not free from danger?"

"THE SIGMOIDAL FACTOR IN CONSTIPATION."

Dr. E. A. Hamilton, Columbus, Ohio, said: "In a certain per cent. of intractible cases of constipation, organic change in the wall of the sigmoid is the controlling factor. This change is entirely independent of any disturbance which may occur on the outer surface of the viscus; e.g., malposition and pathologic flexures due to adhesions. The change in the gut occurs in the sub-mucous and muscular coats and consists of a round cell infiltration of these coats which subsequently contracts, thereby to a greater or less degree narrowing the lumen of the bowel. The round cells change into spindle cells, subsequently undergoing a metamorphosis into true connective tissue. The contraction of this connective tissue so narrows the caliber of the sigmoid that constipation of an obstinate type must result. This change is not always limited to the sigmoid, it frequently involves the descending colon as well; in addition to the contraction of the gut it looses also its resilience which further adds to the difficulty of the passage of faecal debris. The etiologic factor is the absorption of bacteria and toxic products from the sigmoidal contents. The mesentery is also involved and is thickened and shortened. The whole process is chronic, several years being required to bring on the condition. Surgery offers the only relief as anastomosis must be effected by any suitable surgical procedure between the unaffected position of the intestinal tract above and below the lesion.

"A REPORT OF TWO CASES OF SIGMOIDOPEXY."

By Dr. S. T. Earle, Baltimore, Md., who said: "That in one of the cases there was the 3rd degree of prolapse of the rectum, the invagination of the upper part into the lower portion of the rectum; in the other case there was a very acute flexure of the sigmoid upon the rectum; both of the conditions, as is well known, are frequently due to an abnormally long meso-sigmoid The symptoms in each case were obstinate and persistent constipation, frequent bearing down pains in the lower pelvis, a sense of weight and especially a feeling of unrelief for some hours following a stool, or an attempt at the same; associated with these local symptoms were darting pains in various parts of the body, nausea, anorexia, frequent headaches and the various neurotic symptoms that go to make up a typical case of neurasthenia. The case of invagination was diagnosed positively by a digital examination while straining at stool, the sulcus being distinctly felt with the finger; the case of acute flexure was diagnosed by means of the protoscope, the flexure being so acute that it was only possible to enter the sigmoid with the protoscope by getting the end of the latter around the flexure, and pulling it aside. The flexure was so acute that it obliterated the lumen of the bowel at this point. The technique of the operation is such as is given in Tuttle's and Gant's works on "Diseases of the Rectum and Anus." I met with no special difficulty in performing the operations. The meso-sigmoid was very long in both. I was particular in pulling off the abdominal peritoneum where the sigmoid was to be held in apposition, and also in attaching the sigmoid to the transversalis fascia. Both cases made good recoveries, except that one was retarded by a stitch abscess. The results in both cases were most satisfactory and pronounced, with almost immediate relief of the persistent and obstinate constipation, with the gradual disappearance of the neurotic symptoms. Dr. Gant has recently reported a number of sigmoidopexies and colopexies with most satisfactory results.

Dr. Clark in a paper read before the Medical and Gynecological Sections of the Medical and Chirurgical Faculty of Maryland, on Feb. 15, 1907, called attention to the frequent associations of gastroptosis, floating kidney and enteroptosis in the same individual."

"FECAL IMPACTION."

Dr. Lewis H. Adler, Jr., of Philadelphia, Pa., in a paper entitled "Fecal Impaction," called attention to the result of obstipation, or an attack of constipation causing an accumulation of feces in the caecum or in any part of the colon; but the term impaction, the subject of the paper, should be usually employed when such an accumulation occurs in the pouch or ampulla of the rectum, or in the sigmoid flexure.

Attention was called to the difference between an ordinary persistent constipation and an impaction, as the latter may follow from a single attack of constipation; whereas obstinate constipation may never, or only

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after a long period, cause impaction. The symptoms of the two conditions are also very different, as an impaction is usually marked by a diarrhoea, whereas chronic constipation is associated with costiveness. After calling attention to the various causes of the malady under consideration and the symptoms of the same, the treatment was detailed as consisting primarily, in the removal of the mass, and, secondarily, in the relief of the inflammation of the mucous membrane occasioned by the irritating presence of the fecal matter as well as the removal of all causes which contribute to the constipated habit, which is undoubtedly the prime factor in most cases in producing an impaction.

The easiest manner of breaking up the fecal mass is to put the patient under an anesthetic and then to forcibly divulse the sphincters, after which the mass may be disintegrated by means of the finger, a lithotomy scoop or an old fashioned iron spoon. In women considerable assistance may be rendered by passing a couple of fingers into the vagina, and by this means steadying the mass so that it may be the more readily broken.

In some instances the writer was able to break up an impaction without resorting to anesthesia, simply by using the finger and sometimes by the additional use of a bivalve speculum and a rectal scoop or spoon.

Previous to resorting to instrumental aid in the removal of the impaction, the fecal mass may be softened and its passage facilitated by the use of enemas,—especially is this so in cases in which the sigmoid is the part affected,—in which situation material assistance cannot be gained by the employment of instruments. For the purpose of administering the injection a douche-bag holding several quarts is to be preferred. The injection substance should be composed of soap and water to which I have found the addition of glycerine of considerable benefit, a dessert-spoonful to a quart. When the impaction is in the sigmoid, the injection should be given through a Wales bougie,—preferably the one modified by Dr. Dwight H. Murray, of Syracuse, New York, which is stiffer than the ordinary article sold; which latter is frequently useless for the purpose intended as it readily doubles on itself, and a high injection is rendered impossible by its use. When this method is employed the patient should be placed in the knee-chest posture.

A word of caution should be given here as to the danger surrounding the unguarded use of drastic purgative drugs in cases of impaction. By their employment peristalsis is increased and the fecal mass softened, but the bowel in its inflamed and distended condition may be thereby the more easily ruptured, and if, in addition, a stricture is present, the caliber of the gut may be entirely occluded by forcing into it the hard fecal mass with the attendant symptoms and consequences of total obstruction of the intestines. So much for the treatment of the actual impaction.

"PRURITUS ANI—IS IT A DISEASE PER SE OR MERELY A SYMPTOM?"

Dr. Louis J. Krouse, Cincinnati, Ohio, who quoted from the works of Bodenhamer, Agnew, Wright, Ball, Crepps, Gant, Matthews, Tuttle and others, their opinions regarding the etiology of this disease, then stated "Pruritus Ani essentially is a disease which is due, not to a local, but to a constitutional cause, and is due to some trophic changes in the nerves supplying the parts." He further stated that the changes occurring in the skin of the anus and surrounding parts, namely, the hypertrophy, the loss of pliability, and the absence of pigment, can only be explained on the faulty nervous supply of the parts. He showed that an increase of pigment ought to accompany severe itching, and not a total disappearance, and finishes his article by saying that "The absorption of the normal coloring matter of the affected area does occur, notwithstanding that the epidermis was not destroyed," and said "A similar process of absorption takes place in leucoderma.

All authorities acknowledge that the cause of the latter disease is to be found in the nervous system," and concluded with the statement "That Pruritus Ani, at least in such cases, is a disease per se and not a symptom "

(a) Dr. Dwight H. Murray, of Syracuse, New York, presented a new Hemorrhoidal Clamp which had the following qualities in combination, that make a first-class instrument, viz: Scissors-shaped, parallel jaws, can be closed and released instantly without the use of a thumb screw, thereby saving much time while operating.

The Goodell dilator reversed is used as the ground principle for the lock.

(b) Dr. Dwight H. Murray, of Syracuse, New York, reported the case of a man 48 years old who had been troubled with sciatica in the right leg for two years and had also been a sufferer from hemorrhoids for ten years, having frequent profuse hemorrhages therefrom.

The hemorrhoids had not been treated. The sciatic nerve had been stretched and treated by various methods, by a physician at his home town, included in which was the following, completed in three sittings two days apart.

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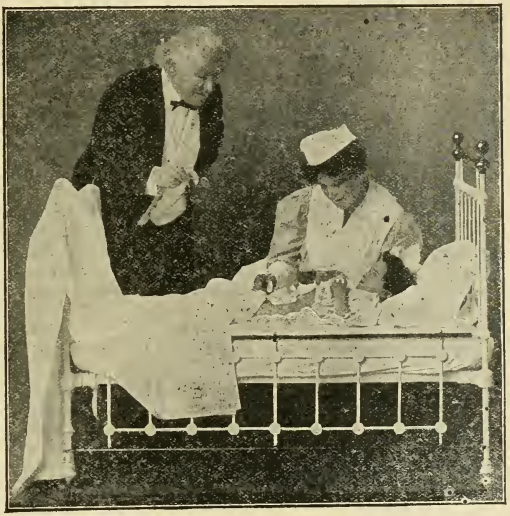

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tions 1-150 gr. of atropine each were given into the sheath of the sciatic nerve. At the second sitting, seven injections of the same amount, and at the third sitting, eight injections were given as before and one extra into the nerve before it leaves the pelvis. The patient was unconscious for fourteen hours after the last sitting; very little improvement resulted.

In November, 1906, the author was first consulted, and on December 12, 1906, operated on him for internal hemorrhoids. He made the usual recovery up to the ninth day, when there was a sudden profuse secondary hemorrhage. The patient was almost ex-sanguinated before the author arrived.

He immediately examined, found the superior hemorrhoidal artery was throwing a full-sized stream; this was secured, the patient stimulated and made an uneventful but slow recovery. The patient has had no sciatic pain since the operation.

Dr. Murray concluded that inasmuch as sciatica is often symptomatic, that no such severe treatment is justified until all possible reflex causes are first removed.

The cause of the hemorrhage was probably due to the thrombus or eschar at the end of the vessel being thrown off before thorough healing had taken place, and was influenced largely by his general anemic condition before operation.

"THE TREATMENT OF ISCHIO-RECTAL AND PELVI-RECTAL ABSCESSES."

By Dr. T. Chittenden Hill, of Boston, Mass., who said "That he employed general anesthesia produced with ethyl chloride for the ischio-rectal abscess and ether anesthesia for the pelvi-rectal abscess.

His experience with infiltration anesthesia has been unsatisfactory. He emphasized the importance of an early incision for perirectal abscesses, claiming that when acute symptoms have existed for a day or two, with pain and tenderness, even before there is much edema or discoloration of the skin, long before fluctuation can be detected, an incision may prevent abscess formation by allowing the escape of blood or serous exudate from the engorged blood vessels.

He advised a T incision and breaking up the existing septa with the finger, after which the sphincters are divulsed. He believed squeezing, scraping or disinfecting an acute abscess to be a great mistake, as it only serves to destroy the new granulation tissue and to spread the infecting bacteria. For the deeper ischio-rectal and in all pelvi-rectal abscesses he recommended rubber drainage tubes, discarding their use as quickly as possible in the after-treatment.

He believed that the great majority of pelvi-rectal abscesses should be reached by perineal dissection."

"CRYPTITIS."

By Dr. J. Coles Brick, Philadelphia, Pa., who said: "The anal valves and crypts, first pointed out by Morgagni, and called after his name, are found as vestigical remains of the junction of the rectal mucous membrane with the skin. They vary in number and size, but are absent in the anterior and posterior commissures. They have no known functions, but are the cause of obscure symptoms, when diseased, and from the fact that the valve or covering part of the crypt may conceal the diseased area, repeated examination will fail to show the lesion, unless each crypt is probed, when tenderness or pain will be felt. A conical fenestrated speculum is the best to use, and when the diagnosis has been made the valve should be removed and the crypt converted into a raw surface, so that healing will obliterate it."

Dr. A. B. Cooke read a paper on "Observations on Certain Points in the Anatomy and Physiology of the Rectum." He expressed the view that the usual conception of the external sphincter muscle is erroneous,—that under normal conditions it is not in a state of tonic contraction, but, on the other hand, is at rest and passive, the shape of the muscle and the arrangement of its fibres being such that the anal aperature is maintained in a state of passive closure. It is not conceivable that a *voluntary* muscle should require the constant action of nerve force to keep it in a state of rest. The only action of this muscle is to voluntarily oppose or terminate the act of defecation by tonic contraction.

With reference to the internal sphincter, the essayist observed that there is no occasion to credit this muscle with any special action in addition to that of the circular coat of the bowel, of which it is a part. By reason of its location and thickness, it probably exercises some passive sphincter control, but its chief action is undoubtedly that of a detrusor, serving to complete the expulsion of feces and keep the anal canal free of contents.

The levator ani muscles, acting together, constitute the sphincter of the proximal extremity of the anal canal. To understand this it is only necessary to remember (1) that the upper or pelvic surface of these muscles presents a deep, funnel-shaped concavity, the beginning of the anal canal being at the lowest point; (2) the strong bundles of fibers which unite immediately behind the rectum arise in front from the pubis and anterior portion of the fascial line and pass downward and backward in close re-

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The Tri-State Medical Association of the Carolinas and Virginia (only members of State Societies eligible). Next Annual Meeting: Charlotte, N. C. Date of meeting: February 18-19, 1908. President, Dr. Stuart McGuire, Richmond, Va.; Secretary-Treasurer, Dr. J. Howell Way, Waynesville, N. C.

The New York Department of Education has registered in *group one* only five of the twenty nine Medical Colleges in the Southern States, This means that in the judgment of that Department only five are conducted on approved lines in all respects.

The University College of Medicine

of Richmond Virginia, is one of the five. Send for Descriptive Bulletin No. 19.

lation with the lateral walls of the rectum, crossing it obliquely at the upper limit of the anal canal.

The well known difficulty of voiding urine while a costive stool is being expelled, which is usually attributed to the action of the levatores ani, is due rather to the pressure of the fecal mass upon the prostatic and membranous portions of the urethra, since, at the time of defecation, these muscles, like the sphincters, must be in a state of relaxation.

The part played by the anal canal in defecation is purely passive, except at the completion of the act when the voluntary muscles which enclose it are strongly contracted, expelling any remnant of feces and bringing its walls again into their normal relation when at rest of close apposition.

The essayist dissented from the commonly accepted teaching that there is an inhibitory center in the cord which presides over the action of the external sphincter and which is called into action at the time of defecation to inhibit its tonic.

The relaxation which occurs at such times seemed to him fully explained by the mechanical pressure of the descending mass upon a structure which only offers passive resistance unless contracted by voluntary effort, and which possesses sufficient resilience, independent of any nerve influence, to regain its normal form and tone as soon as the pressure is removed."

A preparation that has been on the market for the past twenty-five years, and one that is known all over the country as a superior antiseptic, is called Campho-Phenique, put up in both liquid and powdered form. It is one that can be used in all cases of minor and major surgery, in the treatment of boils, carbuncles, ulcers, cuts, etc., and will give the very best results wherever indicated. The fact that so many physicians of prominence all over the country are using this preparation is conclusive evidence as to the veracity of our statements. We are always willing and glad to supply any physician or surgeon with samples of Campho-Phenique for experimental purposes.

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The above condition has been fulfilled in Sanmetto—its ingredients harmonize, forming a most perfect blend of the santal and saw palmetto with soothing demulcents and well chosen aromatics, resulting in a soothing, healing and restorative remedy for the diseased genito-urinary economy, at once efficient, and adapted alone or in combination with other drugs.

A Palatable Cod-Liver Oil Preparation.

The day for nauseating combinations of drugs has passed, this state being brought about by the ability of chemists to present an efficient yet palatable product. All things being equal, that combination which is pleasing to the taste will meet with much more favor at the hands of physicians than another of equal potency but less palatable.

This rule is especially applicable in the case of preparations containing cod-liver oil, a remedial agent that will long continue to be a favorite with physicians. The many pathologic conditions that will respond only to cod-liver oil, showing its great worth, have put chemists on their mettle to prepare combinations in which are incorporated all of the virtues of the oil with the disagreeable features eliminated.

Hagee's cordial of the extract of cod-liver oil compound long ago won the favor of the medical profession, and deservedly so, too. This cordial possesses marked advantages as a cod-liver oil product and its superiority over ordinary cod-liver oil is due to its palatability. Its administration may be continued over indefinite periods of time. A stomach that would quickly revolt against the pure oil or imperfectly prepared combinations containing it, will accept Hagee's cordial without any evidence of distress.—The Medical Era.

The Pathology and Treatment of Hay Fever.

One of the most striking pathological features of this malady is a turgescence of the turbinal tissues due to extensive dilatation of the capillaries. That this is the result of an angioneurosis, involving a more or less pronounced local vaso-motor paralysis, is pretty generally conceded.

In the treatment of hay fever with adrenalin chloride it has been suggested that weak solutions, frequently applied, are apt to yield better results than the occasional application of strong solutions. The application of the solution of adrenalin chloride stimulates the vaso-motor supply, resulting in a contraction of the capillaries. Overstimulation, by reaction, is very sure to result in a complete paralysis of the vaso-motor supply in the region affected. On the other hand, gentle stimulation with weak solutions is not so likely to be followed by a reaction.

Solution adrenalin chloride (1-1000) may be diluted with normal salt solution and sprayed into the nares and pharynx.

Adrenalin inhalent may be preferred to the aqueous solution, for obvious reasons. This product contains one part of adrenalin chloride in one thousand parts of an aromatized neutral oil base, with 3 per cent. chlo-

rotone. It is vaporized by means of a nebulizer.

Adrenalin ointment may be applied to the turgescent nasal mucosa by means of a cotton applicator. Henry Guy Carleton (Therapeutic Gazette, June, 1907) says that "Relief can be accomplished more quickly by smearing one or two minims of ointment containing 1-1000 of adrenalin between the brows and half way down the side of the nose than by the inunction and spraying of the nasal mucosa." The modus operandi is explained as follows:

"The effect is to allay the irritation of the supraorbital, supratrochlear, and intratrochlear and frontal nerves, and the superior and inferior nasal, the nasal rami of the superior maxillary, and the nasopalatine nerves, all of which are involved in a severe attack. Those rami in the posterior nares which may be affected will be relieved simultaneously, exactly as all branches of the supraorbital affected in a supraorbital neuralgia are relieved when an application of adrenalin ointment is applied only to the supraorbital foramen."

Messrs. Parke, Davis & Co. issue a brochure on the treatment of hay fever, which will be sent gratis to any medical man upon request. We suggest to our readers that they send for the brochure, as hay fever is an exceedingly interesting and timely subject.

Prominent Young Mobile Physician Ground to Pieces.

On July 24, Dr. J. T. Killebrew, one of the most prominent of the younger physicians of Mobile, was ground to pieces under the wheels of a moving freight train, while his two companions suffered more or less serious injuries in an automobile accident at Mobile, Ala. They were driving in an automobile and when crossing a railroad track the approaching train was seen. Although the automobile crossed the track, Dr. Killebrew jumped and was caught beneath the wheels of the train. Dr. Killebrew was president of the Mobile county medscal society, a lecturer on the diseases of women in the University of Alabama, and an assistant in the Ingo-Bondurant Infirmary here. He was born and reared at Nashville, Tenn., and his father formerly was commissioner of agriculture of Tennessee.

"Paraldehyd" possesses many of the good without the evil qualities of chloral. Used in Insomnia resulting from various causes. The objectionable taste of the chemical is, to a great extent, disguished in Robinson's Elixir Paraldehyd (see page xviii), which is an elegant preparation.

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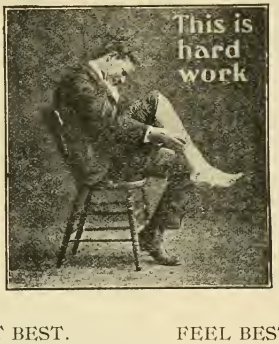

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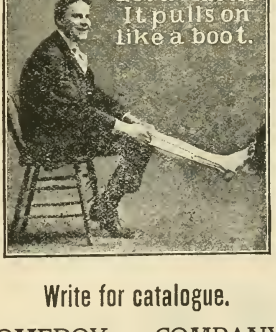

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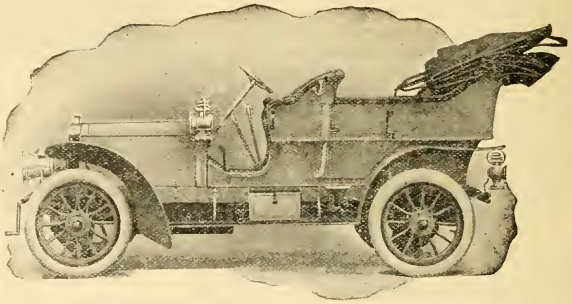

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